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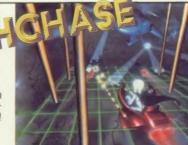
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weeve through the trees at breakneck speed and watch out for helicopters and tanks the greatest prizes of all!



Where netherbeast Grako is building his power. There's much to discover and dangers abound. Free-moving agents may help you or hinder, but might be befriended if ways can be found. The alchemist lore-work was false and a failure, but renders good service in different vein, vanquished aggressors might be your protector. In perilous places of dark, death and pain. Of devious problems and magical task, this song is a warning, a riddle, a clue. To Caraland's saviour it offers a little, So mark well its lines for the saviour is

JUST RELEASED

### JASPER

For the 48K Spectrur the most amazing arcade adventure ye with 22 screens of stunning cartoon animated graphics seeing is believing see the advertisement in this issue now.





AT TIME of going to press, a serious row seemed to be brewing between Atari UK and CBS-Coleco — over a press claim by Atari that Coleco are about

Britain.

'Coleco', claims an Atari
press handout, 'are

to pull their computer-

game operation out of

withdrawing from the UK marketplace, leaving Atarias the unchallenged leaders'.

'We know nothing at all about this', Coleco told BIG K. A phone call to BIG K correspondent in Chicago, Mike Gold, also established that there are no current rumours in the USA to the effect that Coleco plan to cut and run (though the Adam is now heavily discounted) and moreover that their TV ads

are still running with the

ED

ectrum ting ure vet

sof

hics ving t in this usual (expensive) frequency.

Calls to Atari's PR company and to Atari themselves succeded only in establishing that the basis for the statement appears to lie in a remark made recently by a Harrods employee to a member of the Atari sales force - i.e. that Coleco were closing down their computer-game operation. Atari UK Sales and Marketing Manager Rob Harding told BIG K. through a spokesperson, that 'there have been other reports from UK retail sources to the same effect' - though he declined to identify these.

Asked if this was a suitable basis on which to make a press statement that a major competitor was going out of business, the Atarl spokesperson said 'Well . . . . .

We'll keep you posted.



Witness similar computer atrocities in Fred Pipe's '101 Things to do with a Dead Computer', published by Hamlyn Paperbacks at £1.95.

### ON-LINE

### CLIVE REACHES OUT

WITH THE imminent relaxation of COCOM restrictions on computer exports to the Eastern block, The Blessed Clive Sinclair has been gathering disciples about his voluminous robes. Business manager for the East Jan Tyszka has been appointed to go out and win the hearts (and minds) of the East.

The shake-out will only apply to eight-bit machines, hence the (32-bit) QL will not be liberated for export. Home computer ownership is illegal in the USSR.

though many are smuggled in through surrounding countries. Despite restrictions, computers are immensely popular. 'This is only the beginning', say Sinclair. 'We are actively pursuing the Eastern market.'

Obviously these vast, untapped markets are going to be the fulcrum of unprecedented competition. And what are Sinclair's rivals doing to dredge up the Eastern promise? 'We have nothing whatsoever to say on the subject,' Commodore told us.

### Xitan XBASIC in XCeltic XLanguage Xcitement!

MICROCOMPUTING strengthens it's squid-like grip on the world's market with every passing microsecond.

market with every passing microsecond.

Latest eisteddfodder for the beast are hitherto uncatered-for Welsh speakers. Xitan, who make the XBASIC semi-compiler to run on CP/M-type operating systems, have produced a Welsh-language version. This seams to mean mostly that short simple keywords get langer. LOAD becomes LLWYTH and RUN RHEDEG.

Presumably complex concepts such as ON ERROR . GOSUB translate out as railway station names. Try entering Llanfair . . .gogogoch in a hurry.

### BRADFORD ON TRIAL

BRITAIN'S FIRST computer information service is on-line courtesy of British Telecom, Bradford. Append your ear to 'Home Computer Line' on Bradford 722622. The three-minute tape is updated twice weekly, on Tuesdays and Fridays.

The prog is aimed across the board, offering news for gamesters as well as for serious bods into home accounting and the latest in word processing.

BIG K however was able to glean some newsworthy items a little formal, a bit like the speaking clock lady reading exerpts from press releases. Hard copies are available on request for 50p a throw.

Patricia Smith, the entrepreneuress who took the idea to Telecom, explains: 'Bradford is just a trial region. We're hoping to get a big enough response to go nataional.'

### AMSTRAD PRINTERFACE

PROMISED FROM Amstrad is a serial interface for their CPC-64, packaged in pretty charcoal grey. Amstrad also give you a fully fledged RS232 port so all you potential backers out there, be it wrong or right, may now have lots of fun at British Telecom's expense.

There are less frivolous uses for this jolly little widget, such as overcoming the Amstrad's inability to send out certain control codes through its printerface. Now all you have to do is hook up your printer to your new serial port end bung out all the control codes you like. Watch this space for price, review, thrills and spills.



DEEP IN darkest Chingford something stirred. Behind the fortress walls of the Legend Command Post a cast of characters was being moved into position. They were the prime factors in new assault on the imaginations of computer game layers everywhere — the participants in The Great Space Race.

If all has according to plan, the first 'attack wave' of Legend's new game should be in the shops now. When BIG K was ushered through security into the command post all was still highly



classified, from the unique packaging design through to

the reason for the very race itself.

Chairman John Peel displayed the former, a classy little number in blue PVC with silver printing, proudly claiming that a certain Big Chain Store (sounding like footwear specialists) were so

thrilled with it they were making special provisions to display it.

As to the background to The Great Space Race, it all appears to centre round a revolutionary new alcoholic beverage known only as Natof. 'It has all of benefits of the strongest alcoholic drinks,' explained John, 'but absolutely none of the side effects.' The effect on the civilised galaxy is shattering — everyone wants it. The race is on to get it.

'If it has any equivalent it's like the Beaujolais Nouveau Race that takes place each year,' MD Jan Peel told BIG

TGSR's cast of characters will be one of its chief attractions. All will have a convincing screen 'life' through the facial expression routines of Movisoft2. BIG K exclusively previewed Vindaloo two issues ago and presents some more cast members here. A particular favourite of John's is Genghis, a character he describes as, '. . .a failed pirate.' Each TGSR character has a detailed biography contained in the booklet which accompanies the game.

With TGSR now complete husband-and-wife team John and Jan are already working on their next project. With typical Legend vagueness all they will say is that we won't have to wait very long to see it.







Meena Haberdaber

Uno

### CODEBUSTERS IN WORLD-WIDE COMMS ALERT

THE GLOBAL hacker threat reached new proportions last month with a total break-down in Prestel system security.

Prestel, British Telecom's prestige network, has been accessed by hackers before, but only in low-security areas, Unfortunately the dedicated team of codebusters (you lot out there know who we mean don't try and look innocent) accessed the secondary testing system to find a list of secret personal codes including that of Prince Philip's mailbox. 'I do so love puzzles and games. Ta tal Pip Pip!' was left as a message. Come on you guys, you can do hetter than this!

Prestel claim that it was a oneoff error and that they have now
changed all the access codes for
the system. They further
maintain that it's impossible for
hackers to, say, order 5000 tons
or corgi excrement in someone
else's name, because there are
protected 'gate-ways' in the way
preventing unauthorised access
to ordering systems. It might be
uncharitable to suggest that if
one system can be breached,
then so can the next.

But not to worry. An unidentified German hacker has shown a deep sense of ethics by turning down a contract to break into a credit card system to

obtain vital top secret info about Lady Di's shopping habits. Approached by a West German magazine, the noble outlaw refused on the basis that it's all a matter of challenge, not greenbacks. Our faith in human nature is restored.

Be that as it may, the business world is getting worried. We spoke to Gerth Postlethwaite, spokesman for Interglobal Titanium and Timber, one of the world's leading ten multinationals – recently in the news for their controversial scheme for extracting bauxite from limestone nodules mined from the Lunar marina or 'seas'.

These people have placed us in a category A negative contingency situation' he explained. 'We are thinking in terms of a bi-fold response capability. We have authorised the establishment of recruitment centres on world-wide basis. offering a wide range of financial inducements for these so-called hackers to join our telecommunications teams. As a final solution to 'electronic insurgency' we can only advise central government to institute specialised catchment areas for the re-education of these irresponsible persons."

So don't say you haven't been warned.

### **ORIC LIVES!**

RUMOURS THAT Oric Products International are on the edge of disaster have been flying thick and fast lately, but true to their roller-coaster reputation, the company seem to be bouncing back with the announcement of three new machine launches in the new year.

The true successor to the Atmos will be the 6502-based Stratos with 64K user RAM. There will be no on-board BASIC but instead a variety of cartridges, with up to 112K of ROM to be plugged in for specific applications.

The machine will have an 80-column display, and will look superficially like the Atmos, except that the mysterious FN key will suddenly become usable for BASIC key-word entry.

It looks like the Stratos is the micro that the Atmos should have been, just as the Atmos was the true Oric-1. The other machines are the oddly named Oric II, a 16-bit 128K business PC, and a portable using an 80x25 LCD display.

Can the Cambridge boys pull it off? Here's 'OPIng!

ROCK SOFT are a new company formed expressly to protect music rights. As such, they stand to bring a new dimension to the micro world - that of paranoia. writs, and legal battles. All of these have excellent news value. First on the blush list has been mastertronic. They nestled up close to Michael Jackson's 'Thriller' in their game Chiller, without so much as a nod at Rondor Music (London) Limited, who own the rights. Rock Soft, who had bought the rights, moved in quickly, and although Chiller remains on the market. the second edition no longer emits Old One Glove's theme scream.

### NAIVITY

'We'd like to think that music theft results from naivity', says Rock Soft director. Martin Humphries. 'But it's not young, inexperienced programmers that do it. It's the work of marketeers. This is especially blatant in the case of 'Thriller' which is the biggest thing this decade.'

### ACORN JOINS THE IV LEAGUE

THAT STANDS for Interactive Video, and it's starting to look like next year's thing in home entertainment.

IV means pulling images off Video systems under computer control. It's proved so promising that a National Interactive Video Centre is being set up, and now Acorn are getting in on the act with a combination Japanese laser disc player and Beeb Model R

It seems, however, that noone told Acorn that their package, which will sell for £3000, will have to compete with Thorn FMI's established system which, since it uses a non-laser disc goes for a mere £1000. They're going to need some aggressive marketing.

Initial IV uses will be educational, but it's not hard to foresee games applications say, the insertion of video sequences in adventure games.

Wanna play Mach 3 on your Newbrain? All things are possible these days.



### A Groovy Pad for the Well-equipped Adventurer

ARE YOU embarrassed to be seen using that old-fashioned graph-paper to draw up your Adventure maps? Or maybe (shock, horror!) you were using the backs of old envelopes? Print 'n Plotter Products have stepped in to help you restore your PoseCred rating. The Adventure Planner is a 50 page A3 pad specifically designed for adventure room

lavouts.

The pad retails through dealers at £3.95 and is available via from the makers at £4.50. Each sheet can be used for over 150 locations, and the pad comes complete with useful hints and tips (which end of the pencil to use?). Definitely another way to attain Hampstead values, we say.

### **ASHES** TO **ASHES** DUB DUB

51

el

es.

Mastertronic's PR admit that the game was written around the Michael Jackson video. And the copyright? 'We just didn't think," they said. The fight between the two companies has now been settled out of court for an undisclosed sum.

Rock Soft are sitting on rights to some six or seven thousand arrangements. That's virtually every song you'll hear in Europe', says Martin, Out of these, Yellow

Submarige, Charlots of Fire and bona fide Thriller are all paidup, soft-works in progress

Thriller will be next Christmas's mega-game', says Martin, 'Mastertronic caused production to fall three months behind, because Chiller put our company right off."

Martin set up Rock Soft after 20 years of protecting copyrights in the music business, Another music business renegade is Activision Director, Geoff Heath, Activision recently made UK history by slapping down Microdeal, Lover Cuthbert in the Jungle, which bore more than a passing resemblance to Activision's

The music business has hard-bitten with been copyright protectionism for years. There have been several occasions in the software business for someone to come down like a ton of bricks on copyright violation. It's only suprising that it hasn't happened before. Now it looks like byebye to an era of laissez-faire plagiarising. Commercial programmers take note!

### ANY OLD IRON?

WHAT'S the ideal Christmas present for the micro owner who has everything? The answer could be a year's membership of the Micro Repair Club.

The Club offers a 'Repair-Guarantee Package' to which users can subxcribe when their micro manufacturer warranty runs out. The one year package costs £24.95 and renewal after that is £14.95. If you have a rich friend, you may be able to persuade them to fork out £57.95, which covers you for four years.

Home computers will be repaired, and the only cost to you will be the postage to their service department in Hampshire. The Micro Repair Club's service is underwritten by Domestic and General Insurance.

The computer console only is covered and if - in the opinion of the Micro Repair Club - the repair costs exceed the market value of the equipment, they will either supply you with a new computer or the full purchase price, as long as the micro is not more than five years old.

If you want more details about the Club, which also plans to send members' newsletters, special offers and other goodies, contact: The Micro Repair Club, Swan court, Mansel Road, Wimbledon, London SW19 40.0

CONTINUING the never ending saga of cheapware for impoverished punters: Charlie Charlie Sugar have released Nuke Lear and Tomb of Akhenaten for Spectrum at £2.99 and a 'revolutionary new software house of says here) Computer Records have done on old style K-Tel and produced Select 1 'compilation tape' comprising Greatest Hits from houses like Quicksilva, Ocean, Bug-Byte and Anirog for £12.49. Titles include Hunchback, Kong, Hexpert and Skramble. . . sounds like real original stuff — well, no it. doesn't really, but who cares at these floggeroo Prices? You do? Well, by the stuff anyway: available on Spectrum and 64, Select 1 includes 12 titles, so the price per-title is a pretty nifty, er, £1.04083333. Can't wait. . . By the way, pioneer budgeteers Mastertronic have just sold their 1 000 000th game.

And still they come, scenting a quick kill among the ranks of nouveau punters: a Big Hello to Software Supersavers, and a respectful notation of their prices: (2.99 buys you a range of titles including Ziggurat. Flap, Fred's Fan Factory and yes - many others! Note for cognoscent: S Supersavers are a subsidiary of Software Projects, so dontcha just know the stuff will be good. .

Meanwhile over on the Dorkslayer pages, sudden ecstasy breaks out at the news that the entire Ket trilogy will be marketed within a very few days at a price of £12.95 the lot (and they're robbing themselves, honest yuyl. For the aforementioned thirteen bucks you get: Mountains of Ket, Temple of Vran and Final Mission. Total saving £3.55, and



a bargain if we know anything about il.

Finally, a swift reminder to certain software houses who have mistaken the purpose of Cheapskate corner, and a judgment from Lord Denning. 1 have carefully examined the column antitled Cheapskate Corner in the BIG K magazine and am entirely convinced, as indeed the Editor claims, that the term Cheapskate, as used in the editorial context, refers wholly to the impoverishment of the consumer - the Hacker on the Clapham Omnibus - and not to the makers, manufacturers or distributors of the discounted computer software. The complaint by [deleted], to wit that his company was being unfairly labelled as miserly, is therefore rejected.

By the way, Mr. Precisely who is Mr Jet Set Willy, and what does the term 'Poke' mean?

(Laughter.)

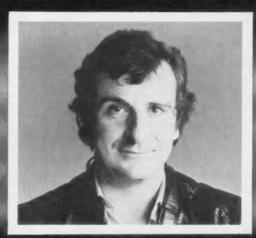
WIIM TO THE

NEWS feature

ARE YOU READY FOR ...

# The Hitchhacker's Guide TO THE UNIVERSE

MARGARET
WERTHEIM
remembers her
towel, and also
doesn't fail to
interview
DOUGLAS
ADAMS, King
of the PanGalactic
Gargle-blasters



SITTING IN his study in a house in Islington surrounded by electronics Douglas Adams, the man who put an interstellar bypass through Planet Earth, is segerly trying to get a demo disc of FORTH going on his new Apple Macintosh. Adams has just finished saying how much he loves the Mac which he now does most of his writing on. He claims its windows, icons and mouse offer the most natural tools for the writer.

While we want for the Mac become the disc, which it just

While we wait for the Mac to accept the disc, which it just doesn't want to do right away, he explains that he is learning FORTH so he can write a program to do 3D crosswords. It is a project he began on his DEC Rainbow, which sits next to his Apricot which sits next to the Mac. Just why he wants to do 3D crosswords when most of us have enough trouble with the 2D variety never became clear, but a man who's just written a novel in three weeks has probably earned the right to include in a bit of mindless character crunching.

of mindless character crunching.

So Long and Thanks for all the Fish is the fourth and definitely the lest, says Adams, in the Hitchhikers Guide to the Galaxy series. After two radio series, four novels, a TV series, a forthcoming feature film and a soon-to-be-released Hitchhiker's computer game Adams has decided to stop playing God with the universe and return to mother Earth.

### **MAGRATHEAN EFFORT**

Creating new worlds can be hard work and, as Arthur Dent found out, so is saving them. In So Long Arthur finds himself back on Earth and only too eager to stay. But just when it seems he has hung up his towel forever the Galaxy gets in his way again. I won't divulge the answer for those who are longing to know God's Final Messags, which is written in huge flery letters on the last page, except to say that it's greater than 42.

So Long, which was written in a locked hotel room in three weeks, is the end of an eight-year trek for both Arthur Dent and Douglas Adams. After the interglactic battles and mega-binging of the first three episodes So Long is a very quiet and intimate book. For some devotess it may prove a bit disappointing. Neither Zaphod or Trillion appear at all and Marvin doesn't crop

up till the very end when he at last finds a moment of ... well not quite happiness, but almost.

There are many questions left unanswered: Where are all the dolphins? What happened to the mice? And just what became of the interstellar bypass? DON'T PANIC there's plenty of room for another sequel should Arthur/Adams ever decide to pick up his towel/pen again.

### 42 AND COUNTING . . .

Adams doesn't really think of the series as SF despite its setting. He refers to himself as a comedy writer who wandered into SF by accident. He says he'd like to get away from it but admits all his best ideas are the SF ones. "It just keeps getting in the way." Overtones of Arthur Dent I suspect.

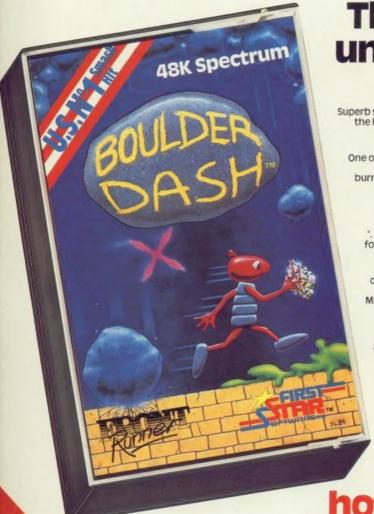
His wonderful ability to exaggerate is so ideal for SF. As anyone who's ever tried to make sense of a restaurant bill will know, the ordinary laws of mathematics simply don't apply. Who knows, maybs one day we will fly into hyperspace in a Starship Bistromath. Like bistromaths, many of Adams' ideas come from petty annoyances in everyday life taken to their ultimate absurd conclusion. Was there ever a greater bug in a system than the one which produced the Ultimate Answer 42 to the Ultimate Question 'What is 6 times 9?' after working on it for millions of years?

Now the boomerang has come back. From out of his living room into the cosmic quagmire Arthur Dent has returned to the living room. Not just his own this time, but yours too, infocom are about to release the Hitchhikers Guide to the Galaxy text adventure game. Adams has written all the text, which is in the same style as the book and punters can travel, like Arthur, around the galaxy at their own risk. It is available on Atari, commodore and Apple so far and because of memory requirements a disc drive is essential at present.

So the fish have met the chips at last. Stand by to hitch a ride

So the fish have met the chips at last. Stand by to hitch a ride on the next passing Vogon freighter. And whatever you do DON'T FORGET YOUR TOWEL!

### Now on 48K Spectrum



# The ultimate underground adventure

Superb scroll routine, described by experts as one of the best pieces of Spectrum programming ever! Sixteen mystical caves, 5 levels of play, joystick or keyboard options.

One of the toughest tests of strategy and reflexes ever! Starring "Rockford" ™ the incorrigible burrowing bug in his restless quest for gleaming iewels.

### **U.S. Reviews**

"... Boulder Dash should be leading contender for anybody's action-game-of-the-year award." Burt Hochberg GAMES Magazine

"...a magical mix of challenge, charm and originality... easily one of the best computer games of the year."

Michael Blanchet Chicago Tribune Syndicate

"This game will be mentioned in my will ... what silicon is and integrated circuits were always meant to be ... subtle brilliance and unceasing magic ... in a class by itself ..." Craig Holyoak **Deseret News** 

"First Star has done a first-rate job on BOULDER DASH . . . the graphics are dazzling . . ."

The Video Game Update

"BOULDER DASH takes the cake . . . the overall quality is excellent . . ." John Skoog **K-Power Magazine** 

This one's hot for Xmas!

To: Front Runner, K-soft die 620 Western Avenue, Lo Tape £7.95 Including VAT	stribution, ondon W3 OTU
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or debit my Access/Visa*	8K/01/80

# GAOST-GOBBLING in the SPECTURE SPECTURE SPECTURE SPECTURE SPECTURE SPECTURE SPECTURE STORY SPECTURE SP

NICKY XIKLUNA reviews GHOSTBUSTERS (the movie)



You meet a poor class of person in libraries these days.



Lighting a cigarette after a heavy can be a dodgy business.



YOU AND I know that no self-respecting ghost would be seen dead in New York. Yet Ghostbusters is such an entertaining movie that it's easy to forget that we've left the old world.

Ghostbusters is a modern update of the classic ghost story. Our erstwhile exorcists dress in para-military outfits. and come equipped with the latest in modern technology. (No garlic, just neutron wands and proton packs). The film brims with wisecracks, fast one-liners, nutty characters and special effects wizardry. Released in the U.K. in early December, it has already drawn more cash to the box office than any other Columbia picture.

At last here's a movie where all American altruism is honestly determined by mazuma. For the Ghostbusters, 'no job is too big, no fee is too big'. Our heroes flee from their first full-torso apparition, howling with terror. Their equipment works, not through stylised, Star Trek histech, but through sheer good luck. This, you and I know, is how real Americans truly are damn lucky to come out on top, and walking a wobbly plank between genius and lunacy. And what is more, we love them for it. (At least in the movies).

Lunacy comes as no surprise, as Ghostbusters was written by Dan Aykroyd and directed by Ivor Reitman of Animal House and Meatballs fame. Bull Murray, Dan Aykroyd and Harold Ramis form the Ghostbusting caucus as Dr.'s Venkman, Stantz and Spengler. Their comic rapport, apparently partly improvised during the filming, is redolent of the enigmatic wit of the Marx Brothers Something that spectacular cinema has largely gone without.

some kind of a dodge or hustle', the parapsychologists go into business with a patented trap for 'vapours, entities and slimers'. Suddenly New York is terrorised by increased psychic activity, which seems to emanate from a strange. messianic apartment block built by sinister architect and occultist, Shandor, All this has more than a passing effect on inhabitant Dana Barrett, (played by Sigourney Weaverl, who stumbles across a bizarre sect of evil entities operating from, of all places, her refrigerator.

When business takes off no one is more surprised than the Ghostbusters themselves. But the colourful effluvia get way out of hand. Selflessly thinking of the lives of 'millions of registered voters, the Mayor puts Ghostbusters in command. So now we're set up for the inevitable million dollar showdown. In this movie, this takes place a top a skyscraper-cum-temple, the set of which cost literally \$1 million amount to build. The Ghostbusters emerge as heroes of New York's oddball population, and even the rabbis are dancing in the streets.

Reitman used mechanical rather than visual effects so that the actors had something real' to work with on camera. Some models required as many as ten people to operate. The ghosts are comical, occasionally scary, and verge on the tacky rather than the slick. This gives them character and is perhaps a relief from over serious and precious realism.

Ghostbusters is a funny, irreverent movie. This is an old cookie... but if you are fool enough to see just one movie this year, you should think seriously about making it Ghostbusters.

# Interview

### Opportunity Knocks.

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ie ld ig This is your big chance – the top programmer's job. All you have to do is be at the right place at the right time.

But don't be deceived, the competition is tough out there!

Due to the complexity of its outstanding graphics and challenging game play, interview is a multilioad game using the Novaload fast load system on tape.

Don't wait for the rush, interview is available now from your favourite software retailer or direct from us.

Tape £7.95 Disk £9.95-Inc. VAT. Commodore 64

> To: Front Runner, K-soft distribution, 620 Western Avenue, London W3 0TU

Rush me\_\_\_\_\_\_Tape(s)\_\_\_\_\_\_Disk(s) of interview

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I enclose a cheque/PO made payable to

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I would like to hear news of more Front Runner

releases Yes
Please allow 21 days for delivery.

BK 02 T





### BUSTIN' THEM SPOOKS IN OL' NU YORK!

Being an examination of paranormal activity in a computer game related to a motion picture of considerable fame.

NOW YOUR average ghost is not the most hilarious thing in the world. Like, it's a manifestation of something dead — like deceased. The unliving. Your basic phantasm has been consistent subject matter over the years for movies that have you reaching for the barf bag rather than ribbinding tape.

But then there's Ghostbusters; a film that breaks the rules and offers up your white-as-a-sheet stereotype in a chucklesome format. In the U.S. crowds flocked to see it making the movie that most marketable of all properties, a box office smash. Small wonder then, that along with all the T-shirt. badge, toy and sticky sweets makers came Activision with plans produce Ghostbusters the computer game!

Games of the movie have not had a brilliant track record to date. Who can torget Atari's fumbled attempts to translate ET and Raiders of the Lost Ark into video games? However, with reservations (which may, or may not, be revealed later), I think Activision might

just have got the formula right with Ghostbusters.

One word of warning before we plunge headlong into a close examination of the game. You must like Ray Parker Jr.'s finger-popping theme tune. I mean really love the thing to the point of obsession. Because once this game starts the darm thing just won't quit! A music panic button should have been mandatory.

Okay, so you're a Ray Parker Jr. groupie and the game has loaded. The title screen comes up, the music starts and on comes the bouncing ball to help you sing along with the lyrics that scroll up the screen. No kidding. This was the only time I could've used that barf bag. Pressing the space bar punctuates the music with the yell. 'Ghostbusters!', in impressive, natural sounding speech. This and a couple of other bits of dialogue in the game are produced by a system called Software Speech – a big bonus for CBM 64 owners

Pressing f1 or f3 starts the game. You are applying for a Ghostbusters franchise and need funding. You can either input an account number or, as a new customer, accept a flat rate \$10,000 loan.

The 'account number' is gained after successfully completing one or more games. Activision claim that the code can be used on any version of the game anywhere in the world. So remember, wherever you go don't leave home without your secret Ghostbustrs.

number — vou never know where you might find a game.

Cash in hand you move onto selecting a suitable vehicle for your operation. Four are offered, ranging in price, speed and capacity from a VW beetle to a highperformance sports job. Next is equipment selection. Check out the goodies on display: PK energy detectors. image intensifiers, ghost traps, ghost vacuums, a laser confinement system, and more. Equip your vehicle according to your budget and you're ready to tackle those spooks.

Out on the New York streets, things are getting heavy. Slimers terrorise apartment blocks and Roamers are converging on the Temple of Zuul in ever-increasing numbers. A real bad trip is in the air.

Check the streetmap display for Slimer alerts and work out the shortest route to the target. Thumbing the joystick fire button switches to an overhead view of your vehicle barrelling along the street. If you have a ghost vacuum on board you can suck up any Roamers on the way. At the target zone two of your Ghostbusters deploy a trap and attempt to lure the Slimer into it using their negative ioniser power packs. Should the ghost escape the ion streams one of your men has had it. Software Speech kicks in with, 'He slimed me!' and you're looking for a new Ghostbuster. Worse still,

should the streams cross both men go down. It's a tough, dirty job but someone has to do it.

Successful entrapment gains a triumphant Ghostbusters! shout, boosts your bank balance and you're back cruising the streets looking for work.

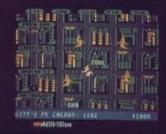
So it goes with calls back to Ghostbusters HQ for tresh supplies and more men. All the time the game is picking up speed and periodically enough. Roamers get together to form the dreaded Stay-Puft Man.

I really got to hate this 100ft. high pile of walking marshmallow. Not only does he trample over buildings, you have to pay for any damage caused. Just when I was beginning to build up a healthy bank balance on he stomps to lose me four thousand bucks per block! Get rid of him, quickly.

Ultimately you must confront the terror of Zuul and get two men into the Temple entrance. This is not so straightforward as you have to be well in credit when that moment comes. Needless to say, the Stay-Puff Man has prevented me attaining this state as yet.

GHOSTBUSTERS, FOR Commordore 64 from Activision. Format: cassette. Price: £10.99 (disc version £19.99). Also available for Spectrum 48K (£9.99); MSX and other leading systems to follow. Overall rating: KK

Top: The Ghost Gang prepare to face their ultimate test in the movie. Right: The main map screen of the game. Roamers converge on Zuuf's Temple.





Traping a Limer. Fire the ion beams then activate the trap, screen centre, The

### FERRET

RUMOUR HAS it that things did not quite go to plan with the Commodore TV ad featuring an elephant in a boxing ring. It appears that after four hours setting up the elephant in its shorts and gloves (it was originally due to tower menacingly over its human rival), when filming began, the elephant rose and a loud rip was heard...ts shorts had ripped and they had to film around this little problem...Which is why the Heffelump don't stand up...

HAS UNCLE Clive lost his marbles, I wonder? After reading that five of the old Imagine team are now involved in the rewriting of Bandersnatch on the QL, I learn that of the five people stated to be involved in the relaunch, only two are (Dave programmers Lawson and Jake Gloverl. of whom programmed on the 6502 previously. The others seem to be PR types...

> IT NEVER ceases to amaze me that the people involved in the micro industry have such weird and wonderful backgrounds. Take David Ward, a director of Ocean Software, He used to have a company that rented out theatrical scenery and props for a humble mail order company called Spectrum and then changed its name to Ocean. The rest is history...

TONY CROWTHEN the an wire floughty to Suicide Exercises. Son of Blooger and Fatty Pigeon (to reme full a few) has felt Gremin Graphics and set up a new unipany united Wizard Bossopment His new game Syytec treatilisms.

Dur Man on the
Inside reveals the
Emberrassing
Trutty behind THAT
Commodore ad,
plays the Bankruptcy

NO NO, tell me it's not true! I hear that Mylstar, the US company that bought you Mach3/Cobra Command and Us vs Them has gone bust, this (hopefully) means that their machines will be rather cheap to buy second-hand they current cost £1695 and £1897 for the stand-up and booth versions respectively.

The reason for their apparent collapse? The bad state of the arcade market and numerous hardware faults in their machines.



MUMBLE MUMBLE...mumble Creative Sparks have gone bust!

Blues, charts

Rices and Falls

and solves an

What? I'd better give my Scottish friend Gordon Reid [their software manager] a

Click

Hello Gordon, it's The Ferret here. I'll come straight to the point. I've heard rumours that Creative Sparks has gone bust.

Pause

'Can your mother stitch,

Er, sorry, Gordon, I'm just after some clarification.

and props for Commercials and other usages. He started with a humble mail order company called C

Oh I see - so it's probably just some unhappy programmers spreading doom and gloom?

gama) will charry be re-essed for the Commodore 64mulitlevel woode game."

Where did he get the title Gryphan from? He just happened to be watching a well known bank commercial on relevision. Those of you

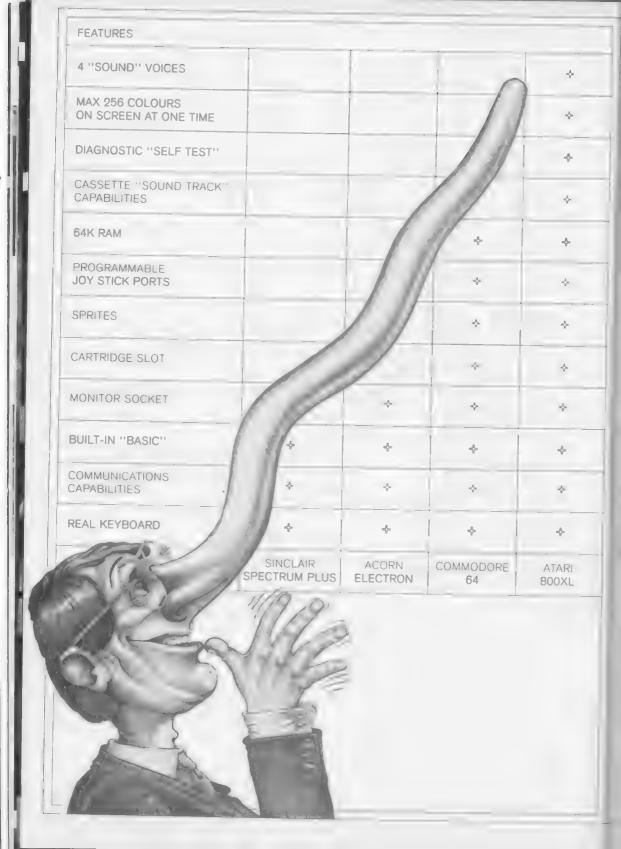


"I'd imagine so. We will still be producing games, with our next releases being after the Christmas period".

buying Crowther's latest gam Suited Express wifind that it does not have Currell Speech In II advertised. The reason for these changes could have a little to do with Tony's leasing Gramlin, I gather.

DID YOU ever wonder why the classic arcade game Donkey Kong was DONKEY Kong? Well, Atari tell me that the Japanese gentleman who did the translation made a mistake and wrote Donkey instead of MONKEY!

GOSSIP...GOSSIP...GOSSIP.



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### PICK OF THE MONTH

### K K K

THIS is a game on a theme of horror and despair, a game populated by wandering monsters, a game where no-one can really be trusted, and everyone is a potential enemy.

Through this alien landscape of paranola and imminent catastrophe you must make your way, your single goal, to wrench victory from the jaws of universal defeat.

For this is the strange world of Skool Daze, where even in the eye of God you are a mere pupil.

Microsphere master programmer David Reidie has it off to a T. The claustrophobia and creeping terror of the education system are laid bare for all to see.

We start with a normal day somewhere near the end of term. The Head (Mr. Whacker, who bears a close resemblance to Mr.T) has closeted in his safe a fearful indictment of your year's performance, your School Report. There is only one way out. You must open that safe. Each of the teachers possesses one letter of the safe code and they'll only reveal it if they are first disoriented and then knocked down.

The first is easy, you simply use your trusty catapult, Beakslayer, but for the second you have to set all the school trophy shields flashing, by hitting them. This is done by either bouncing a pellet of the belding pate of one of the monstrous masters, or by clobbering one of the other boys and climbing on his back (real Nature-red-intooth-and-claw stuff!).

But beware, 'cos just as in real life, you'll get lines to do if caught doing anything out of order, and there are a lot of things you can do wrong, from missing class to jumping in the corridors, and the school sneak is always ready to squeal on you. 10,000 lines and you're sent home.

### SCHOOL DAZE Spectrum 48K

A short-panted FIN FAHEY finds Microshpere's SKOOL DAZE just too, too disturbingly like the real thing.

## DOWN WITH SKOOL!

much for the tortuous plot. It's the brilliantly realised graphics that make School Daze such a treat to play. The school building is good as you scroll through its boxy structure, but it's the characters that really stand out. You can insert your own names for all the main characters, from Angelface the school bully to Mr. Creak the History Master. Somehow Microsphere have inserted real individuality into what are very spare cartoon ministures. They all have a life of their own, and even as you sit through another dreary geography lesson with Mr. Withit, the swinging Geography teacher, things are going on around you in the other class-rooms and corridors.

The teacher characters are capable of a wide range of animation, from falling

over to gesturing and writing on the blackboard.

The only flaw, if it is one, is that the game is so fascinating to watch, I found it hard to play seriously, and ended up mischievously knocking over the teachers and wellying the school bully at regular intervals.

An achievement in social realism and fun to play too.

PE

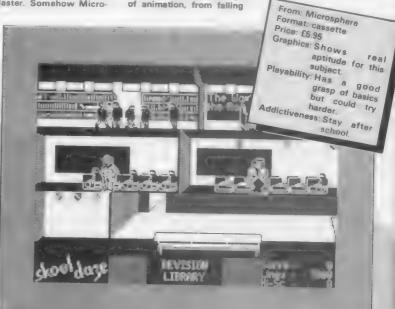
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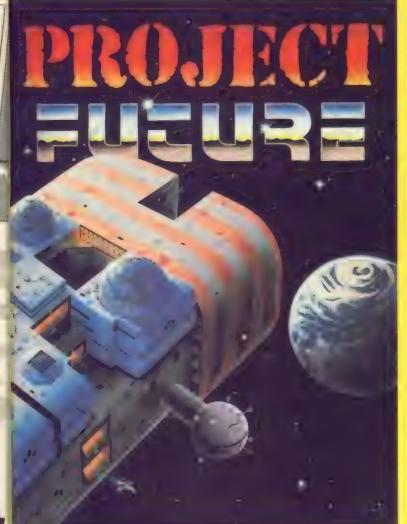
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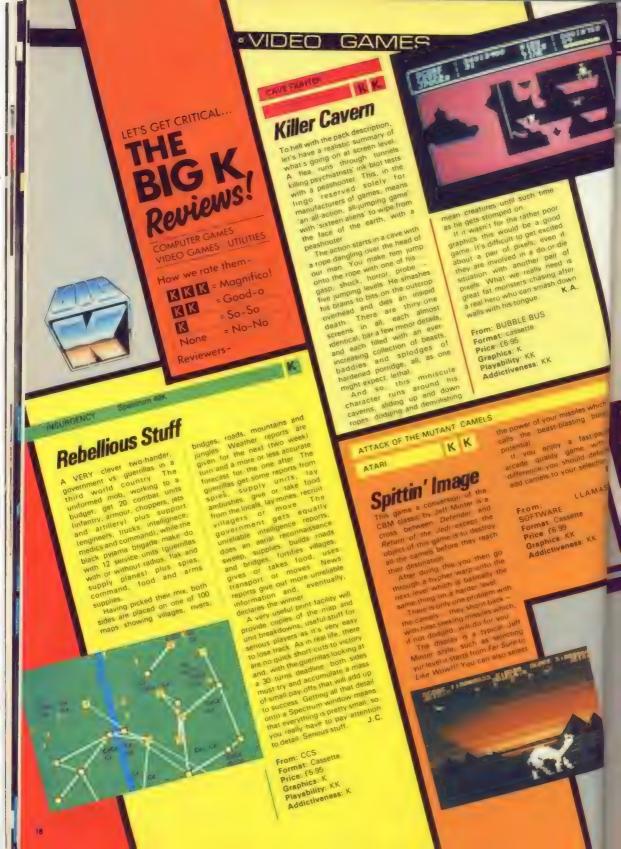
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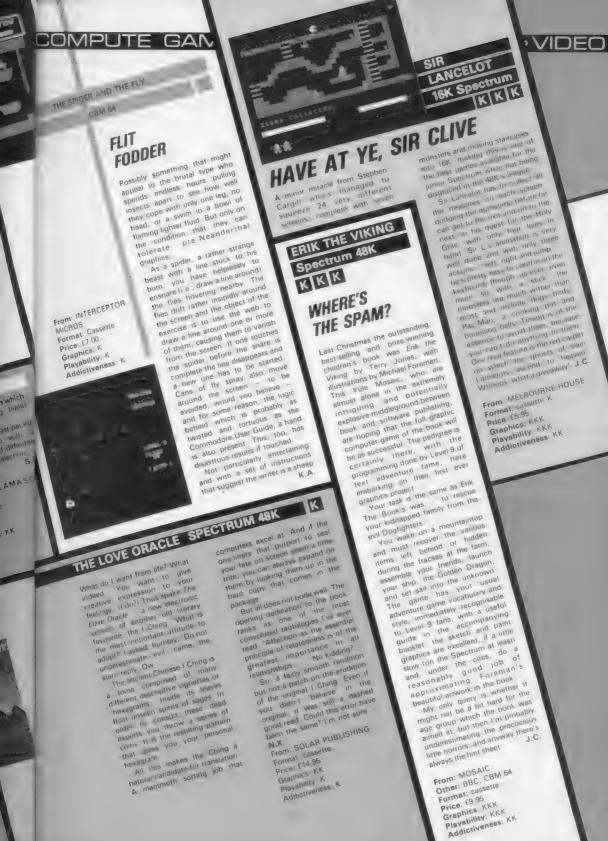
The SS FUTURE is a huge labyrinth of a Star Ship, covering 256 screens of the most amazing high resolution graphics ever seen on the Spectrum.

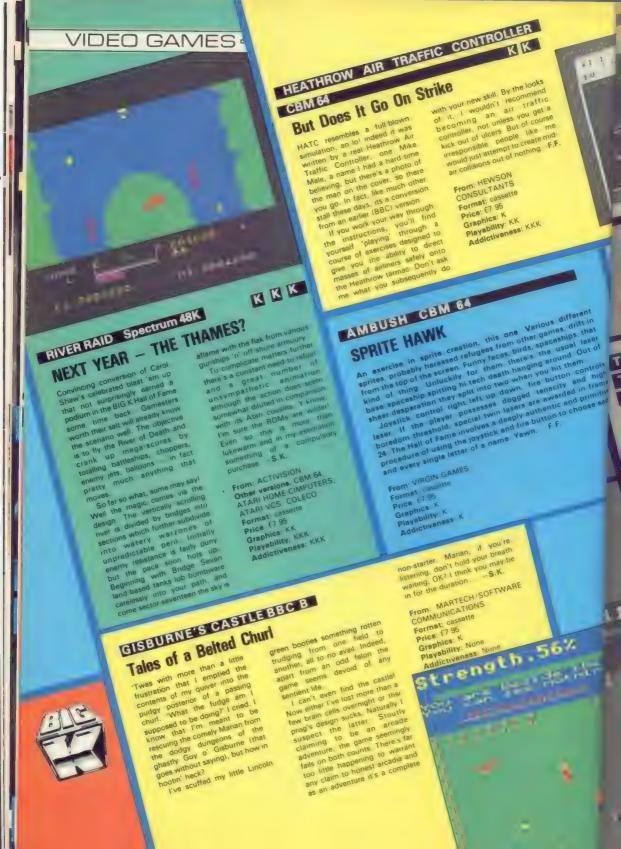
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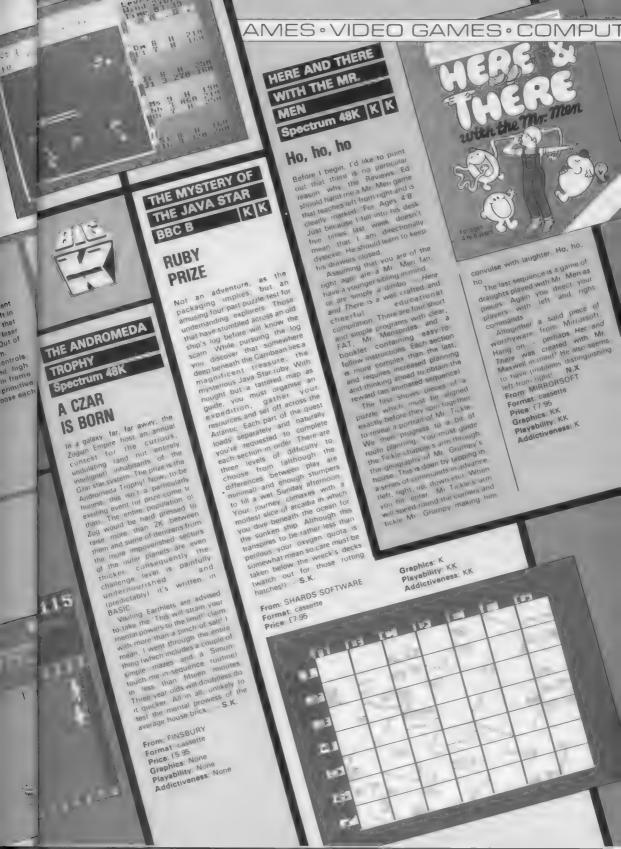
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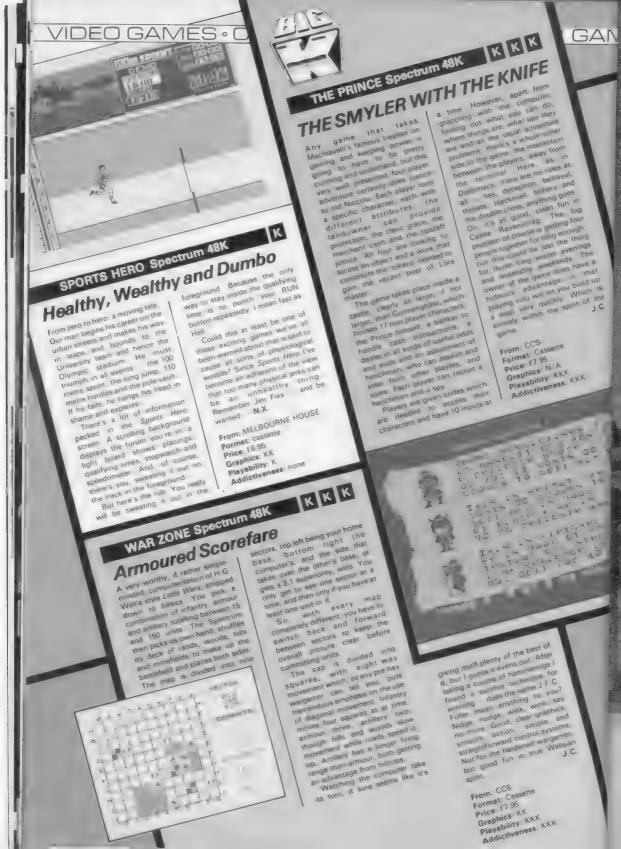
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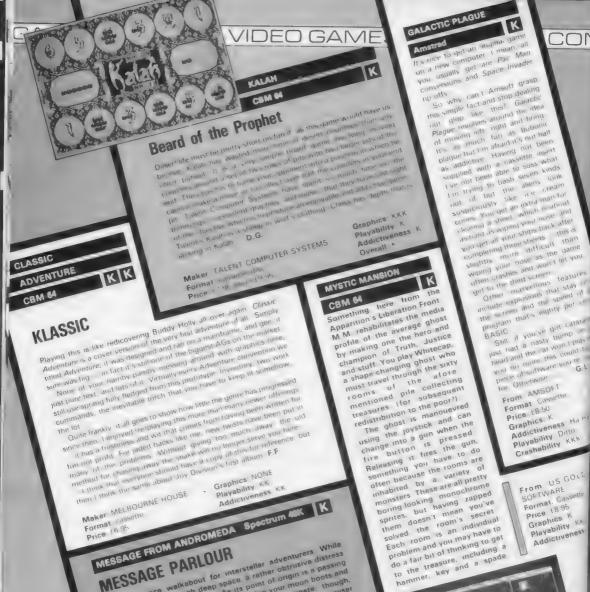
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Taciturn space walkabout for interstellar adventurers While MESSAGE PARLOUR Tacturn space walkabout for interstellar advanturers write trolling happily through deep space, a rather obtrusive distress and procedure approaches agreement to the process of the proce trailing happily through deep space, a rather obthistive distress call crackles across the wire. As its point of origin is a passing a call crackles across the wire. cell crackles across the wife As its point of origin is a passing planetoid you're naturally tempted to don your moon boots and the planetoid you're naturally tempted to don your moon boots. planefold you're neturally tempted to don your meon boots and investigate. (hough. investigate Exactly WHAT there is to investigate, though, remains unclear indeed I finally pulled the plug none the wiser remains unclear indeed I mally pulled the plug from another for my offorts Perhaps the call originated detailed. Assumed the plug from another for my offorts perhaps the call originated detailed. for my efforts Ferneps the cell originated from enother disgruntled Dorkslayer trapped deep within its database? We Wank of the locations are anbbotted ph may never know. Many of the locations are supported by instantaneous split screen graphics, but their effect is rather instantaneous split screen graphics, but their effect is rather discount to the screen graphics. instantaneous spin screen graphics, but their effect is retrief in the diminished by the total lack of any real descriptive office. This control room, as transported to the control room. diminished by the total fack of any real descriptive text. The control room is typical of the type of narrative on other This. control room is typical of the type of narrative on offer this locale is only marginally more interesting than "The red from June and June 1999, and June 19 notate is only marginally more interesting than the red from or indeed. The reception room. The thing informs with all the understand the reception has taken understanding and the reception of the reception has taken understanding and the reception of the recepti indeed the reception room. The thing interns with all the verboarty of a foreign bus ticket linfocom gat your heart out. Verboarty of a formen bus ficket liftocom and your heart out to the standard verb noun arrangement. All very holy the transfer of the standard verb noun arrangement. Input is via the standard verb noun arrangement. All very ho hum Those seeking an SF adventure would be better off with min those seeking an arrangement. num. Those seaking an St. adventure would be better off with a little for the seaking and School from Level 3 or Mckenner (low key). There School (very tough) from Level 3 or Mckenner (low key). It was sometimes and the seaking and the se either Stockhill (very tough) from Level 3 or Michael tow key)
from Software Projects Atternatively you could write your own from Software Projects Alternatively you could write.
Good Space romps are in rather short supply. - S.K.

From INTERCEPTOR MICROS Format: Cassette Price 15 40 Graphics K Playability K Addictiveness Pass

CON

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Graphics K Playability KK

and

Sooner or later you get to

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Unexciting line graphics. almost no sound but

yet the game has an

undeniable charm, a bit like

blaying seaside miniature

Addictiveness

Send JA CC **B**4

Sami 221- S.n otal

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levels of play. score feature. ding cassetts

An amazing graphic action adventure game which puts you in charge of a team of androids trying to reach the core of a nuclear macter before it explodes.

This game has over 2000 rooms to be negotiated and every single one of them is in 3D!! Probably the most exciting game yet developed for the C-64.

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MELTDOWN TO



### NO THEN

This is a delightfully anginal game which uses nature as the setting for a highly cumpelling and challenging game. Guide the Bird Mother as the builds her nest and raises her young, finally protecting them from a predator howk.

Fast loading cossette. The stunning graphics and music Bird Mother are not to be missed



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Name

BK 01 85

# #=3665555 5 COMPUTER GAME IN THE W

AS THEY prepared for the 25th Cadcam International Show, it became obvious that the boys from Enviro UK would really have to move.

They had booked most of the first floor as space only and that's just the way it looked with just 24 hours before the doors opened. There was no sign of hi-tech stands, demo equipment or contractors while all around the air was filled with the clamour of build-up day.

Only four miles away in the Victoria Court clean air the calm atmosphere of Research HQ-Enviro UK heaved and

shattered as Bob Marsh hit the roof. None of the ultra cool waters had arrived, the holograph interpreter wouldn't gel and now MAD-2 (micro assembly droid) was just plain missing!

Bob is project leader for the total environment wraparound program. All(!) he has to achieve is the translation of living requirements into structures. The breakthrough came two years ago when the imaging lasers were successfully integrated with a threadsheet spinner. The principle has been developed so that now the designers schematic - displayed by imaging lasers - can be directly translated into a solid

This production facility is linked to a modified AI-12B from GDC (the artificial intelligence people) so that the program can comprehend what is meant by 'A cleaner concept for living' - then design and build 'the better living environment'.

The major modification to the control hardware was the use of background wafers to provide the huge active database of living standards

everything from building regulations to the dreams of humble dwellings. The idea of booking space only at the show was brilliant. In the center will sit the Enviro demonstration unit - the surrounding area will hold all those structures created by

it. The (selected) show visitor simply states requirements then has his mind blown as the suggested structure is constructed there and then! How can we fail we're going to be RICH!

Bob Marsh wasn't feeling rich - he was feeling sick. There was no time to wallow he had to make the decision to go. Go for it pack the gear, ship it down to Olympia 3, send a runner for wafers (they're preloaded) and we'll fit them on site, grab some fixers and tweak the hi-interps on the way down.

You should have seen their faces - acres of low-start flooring to fill and we turned up with two small trucks and

The screen chart on this page is just a small part of Cad-Cam Warrior's overall map scenaro Each colour code designates 'system'. Short cuts (as junctions) CAN

be taken provided you've done well (and quickly) enough when you reach the option point Otherwise it's the long haul

It's called CAD-CAM WARRIOR.

by Task Set,

and it boasts eight thousand different screens. Yes, you heard right - eight thousand.

Is this the standard of the

New Epic?

the E frame. There was no point in keeping anything under wraps - none of the incredulous contractors would guess the nature of the breakthrough, and anyway we still had work to

Set-up only took three hours and the laser alignment was going well. We still lacked the wafers but they were on their way. . .

THE SCENE is set for the biggest arcade adventure in micro history. It's called Cadcam Warrior and it's from one of the leading games houses in the UK, Taskser

TONY TAKOUSHI reports...



ST WORLD?

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As the final scenario line implies the wafers are the key objective in the game and the runner is the character you control. The computer has malfunctioned and it has swallowed the runner and the wafers into its processing system. The runner has to work its way through the computers locations (8192 in all) to its very heart where the wafers lie. There are 200 alien types (some being rehashed in different layouts) Info Tokens, Phase Counters. Vifa Branches, Online Tokens and Exultation Junctions to destroy and collect on your travels. But I won't define all the above items as it would greatly detrect from that joy of discovery in playing

There are eight square-shaped floors with each floor holding 1024 rooms. These rooms are split into four sectors on each floor 48°2561 with a stairway to the floor above in each corner of the floor.

### PRESENTED

As you play you will be presented with a room which has two mirrored plates (see pics) and the colour of the edge plates will be an indication of the attack pattern for that room. Skillful play is necessary as the faster you complete a room you are awarded with Phase Counters and Online Tokens. These two items allow you to jump ahead and bypass other rooms directly in your path (as laid out in a short-range map at the end of an attack wave) and recieve information about branches further ahead respectively

The key to playing this game well is be rather familiar with the numbers in base eight (play it and find out!). The small section



Above: Stairway to Heaven? Only if you're fast enough.

Below: 3D soft-solid and 8192 locations



Below: The Taskset CadCam Warrior team: justifiably proud of their epic





thought this was one of the most addictr

addicted to this gam

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games ever. At a rough guess I'd say they we

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### 

### COMPUTER GAME IN THE WORLD?

CONTINUED FROM 25

of map (see above) shows a tiny portion of the first floor. You enter top left and would have to hold info tokens to see the branch down from the blue sector to the Orange sector, or you would travel all the way up and down the blue passage to reach the Orange junction

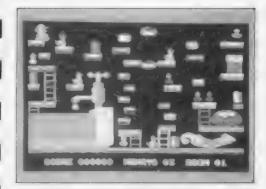
### **FURIOUS**

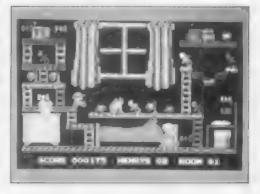
The action in the game is fast and funous and the aliens do not simply have to be zapped. You can collect them, lay mines, lead them into trouble and collect them while they are young, to name but a few. The real challenge in this game is simply its sheer size and the necessity to watch out for (and wisely

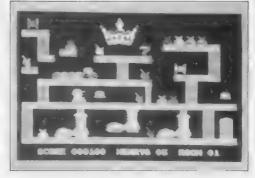
choose) the right branches to get via Exultation Junction to the floor above you

As you can see from the map section (the number 8 and multiples thereof are relevant when it comes to finding junctions to the next sector on each floor, although there are a few surprises in store if all junctions encountered are taken

The graphics and sound are up to the usual Taskset excellence and a great deal of thought has gone into the planning and design of this game. It all shows in the quality of the final product Cadcam Warrior is not a game to be cracked in a week. In fact, I defy anyone to crack this baby inside a month. Maybe two So







### HISTORY

ALL TASKSET games, and Cadcam Warrior especially, are the result of solid teamwork. At all stages from design concepts through to mastering for duplication the designers have been working together, originating and solving problems.

Consider some of the stages which became the subject of discussion by some or all the Taskset team during the development of Cadcam Warrior:

1. The design concept - this grew from ideas about displaying two alternative game play areas on the same screen. They were originally linked by holes through which the player could conduct two battles simultaneously. This idea fused with the concept of a machine created labyrinth and the basis for Cadcam Warrior

2. Detail Definition - to establish the shape of characters and the environment. This is heavily linked to graphic design but must take account of the capabilities of the 64's screen and the requirement that the major characters be highlighted and have special definition to save them from merging with a many-coloured background

3 Storyboards these are produced to establish the man objectives of the game and to show the view of important scenes on the way to the goal.

4. Sound - including sound effects and music, the allocation of channels and the mood which the music should induce. The composition and arrangement of an original score was a major consideration

5. Game Facilities - includes joysticks, keyboard, player options, number of players, security, loading screens and memory management. Add to these game requirements the commercial requirements of scheduling, production, packaging, promotion and funding the need for a team is clear.

### HENRY'S HOUSE

THIS IS a new game from Bathroom, The Nursery, The fame) that sets a new Kitchen and The Playroom standard in graphics and cute. Little Henry Tooks incredibly characters on the 64.

game to all purposes is based, the game a strong arcade on a certain princeling who element was born not too long ago

It has eight different covered include. The before it is mastered

English Software (of Atan Clothes Cupboard, The cute and endearing and the Before I go any further I way he leaps around need to make clear that this platforms and ladders gives

This is another platform screens and little Henry has game BUT it offers a totally to make his way from room new perspective on the to room picking up all the graphic capabilities for the 64 objects and reaching the exit and is tough enough to safely. The rooms to be ensure many a night's play

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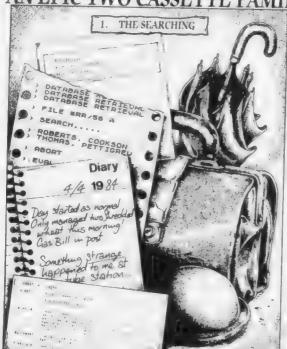
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# KONGRATULATIONS HERE COME DE WINNERS OF DE BIG KOMPETITIONS

BIG K CGL M5 competition

July issue. Entrants were asked to place eight features of the CBL M5 computer plus 'Basic-6' cartridge in the order they would most appeal to a nowce computer user. The best set of answers, in the judges' opinion, was supplied by Colin Meeks of London. He put: 1-C, 2-B, 3-E, 4-L, 5-K, 6-D, 7-J, 8-A.

Colin kops the M5, Starter Pack, Basic-G cartridge and everything he needs to start a full and happy hacker's life!

Game 6 Watch Muto Screen Pocket Pinball games go to 17 runners-up. All should by now have been notified of their winnings.

### BIG K Wico Joysticks competition

October issue. Eight advantages of joysticks over keyboard use in arcade-style games were listed and entrants asked to place them in the order of importance to a home computer games player. The judges checked out the coupons and decided the best order came from Nicky Tiernan of Chester, who put:

1-K, 2-C, 3-E, 4-A, 5-J, 6-L, 7-8, 8-D.

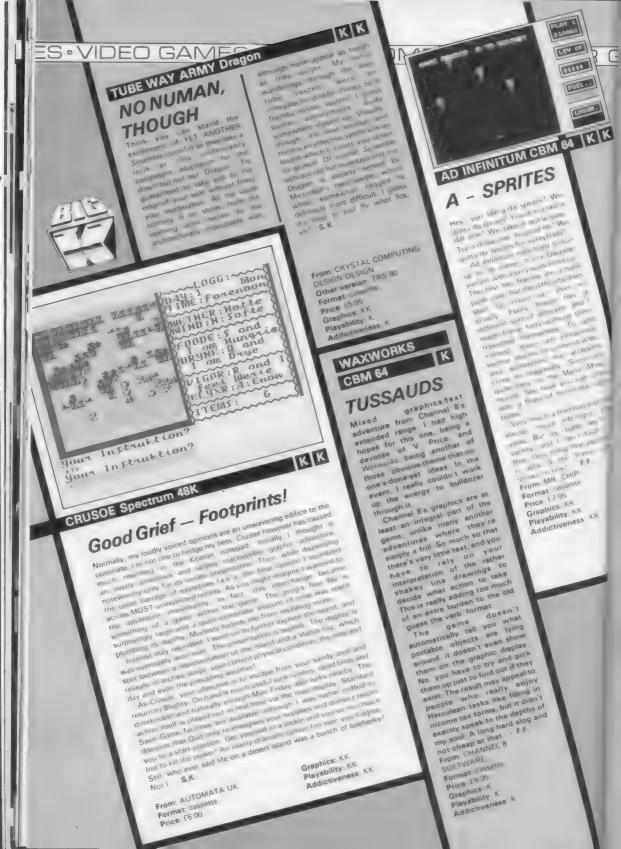
Nicky wins a Wico Track Ball and a 3-Way Joysteck, as do C. Giles of London, Michael Lewis of Buckingham, Mark Metcalle of Auckland and P. Miliner of Tollandine, all of whom submitted next best entries.

Second Prizes of a Red Ball Joystick went to M. Aspinal of St. Leonards on Sea, Paul Brake of Edinburgh, C. Craddock of Horndean, P. Lambshead of Rainham and Kristina Smith of Warminster.

Third Prizes of Bass Joysticks go to Kenneth Gordon of Edinburgh, Stuart Giles of Marston, Robert Kerr of Glasgow, B. Morris of Rochdale and Paul Quinn of Newcastle Upon Tyne. Everyone should have been notified of their winnings.

### Big Kongratulations to one and all.

Stay tuned for more competition results coming real soon.



### The Activision Eight.



Prtfall Harry has to recover the priceless Raj Diamond from the lost caverns. But there is a small matter of poisonous frogs. Albino Scorpions Vampire Bats Electric Eels Need we go on? on Commodore 64, MSX, and Spectrus

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MINE an cope

ght, blast fault it fo n puzzles



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Threatened by molten lava, poisonous bats, snakes, spiders. You alone in the person of Roderick Hero - Helicopter Emergency Rescue Operation - can help Running on Commodore 64, Spectrui



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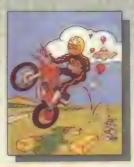
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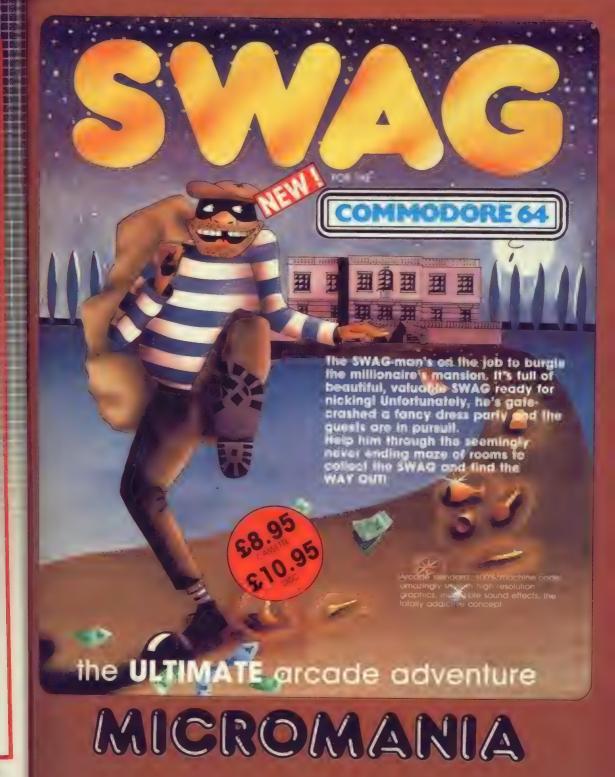
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HENRI - £9.95 ATARI 400/800/1200 with any 16/32K Ram

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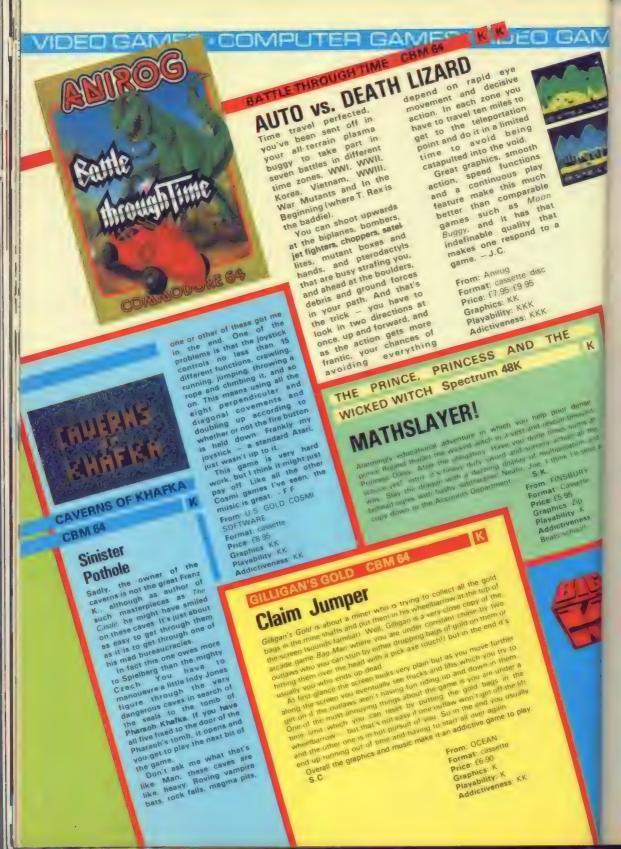
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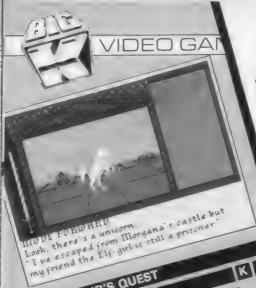
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### KING ARTHUR'S QUEST

### CAMELOT COUNTDOWN mean a lot of trial and error. The Spectrum 48K get use drop actions

Batticularly paffling all these problems is the need to reload A FULL graphic 3D journey through the land of Camelot in the dame combletely wherever the game completely which isn't the shoes of King A. trying to tine ambs of Ning A. (fymir to undo a spall cast by Mordanu la hard. The graphics are adequate. though the 3D field isn't very under a span case by moreaning in deeb divind Aon 9 tather limited only do you have to work out all haspilith (sude, and the myele usual adventure game thing is laid out in chess board vocabularty. like squares, round which you problems, uses of objects. shuffle teeling fairly pawn like spatial relationships and tricky how to load and save, would little puzzles, but you also have movement have been in order, not to to solve a nddle and do all this mention Some pointers on the

before you start imitating a Hill MacGibbon don't give you metallic authropoid uncy help either Abau from a much help either Apart from a spell breaker code and a very general blurb, all you get is an general plans, an you get as an overlay for the top row of the Spectrum keyboard which gives you eight offictive commands You eight uncome commands the left right, torward, drep get. use and spell The mechanics You have to work out for you have to work out or you yourself, which takes a lot, and I HOVER BOVVER ATARI CLOSE SHAVE, ROVER

Basically a souped up version of Basically a sopher ob service a little man appropriately named

The object of this version is to Gordon Bennett. mov all the grass on the lawn mow all the grass on the lawn without going on the gardener's flowerbeds. This isn't so easy when your neighbour is chasing you for taking his Flymo in the

The gardener is another he doesn't take too first place problem he deastro whe role kindly to Gordon going over his nowers so he also ends up problem

THOWERS SO THE BISO ENDS UP Chasing him to take your mower YEWE

Gordon has one thing in his tavour That's his taithful dog Rover Iso the instructions say! That's his faithful dog Mover iso the instructions and you you can use Rovet to by way the gardenet of neighbout gardener or neighbour by privileger this makes hin bark scanned them off) The little problem with Rover

is, he can tisting the noise of the ns. he can returne the noise or the mover and when his tolerance eventually runs out he ends up

Hever Bovver has over eight screens to choose from making it attacking it screens recovered terreman type one of the better Pacman type games around

Price £7 95

Graphics KK

Playability K Addictiveness: K

### BATTLECARS Spectrum 48K From GAMES WORKSHOP Other Versions CRM 64 8 Format. Cassette

USED RUNNERS Ganies Workship have chosen to implement one of their board games for their move into

games for their entire software, but the original game. despite was of work was loss satisfactury and the computer vession can most kindly be described as over

are armed and amound cars in which you can ambitious either race or right the Computer There's a or anomal player of the Shell believoilte or you can use 3 Designer program to costomise Aon, One Auth teapines like powerbrakes. inspectacles of dinners computers. While the weapons autostee! and transport to mines and Three venues are provided a ducting arena the range

Autodrome, a cuccut and a town spikes Once stacted the screen displays three (eal time windows, one for each car and an overall map of the area showing positions plus vehicle displays fuel spend and danage ur weapons So (ar so good sounding, but it's the good someting, but it's me controls that break the game Each battlecar has six steenny tour weapon controls throttle and brakes and amazingly uninformative functions

overlay is prosuded for each and of the keyboard. That's right in the two player version you each take one end of the same Spectrum keyboard, 1 mm in teep Special Reyound - Fine in reset The Combater Aon world eventually teprogram yourself And soundy to have drifte au antendant inhustrices. eulokapie dawe prit Lucalit cau, i see if as a two hander

Graphics: KK Playability: KK Addictiveness: KK Spectrum 48K K K AZTEC CONDOR MOMENT

cummands.

From: HILL MACGIBBON

Format: Cassette

Price: 17 95

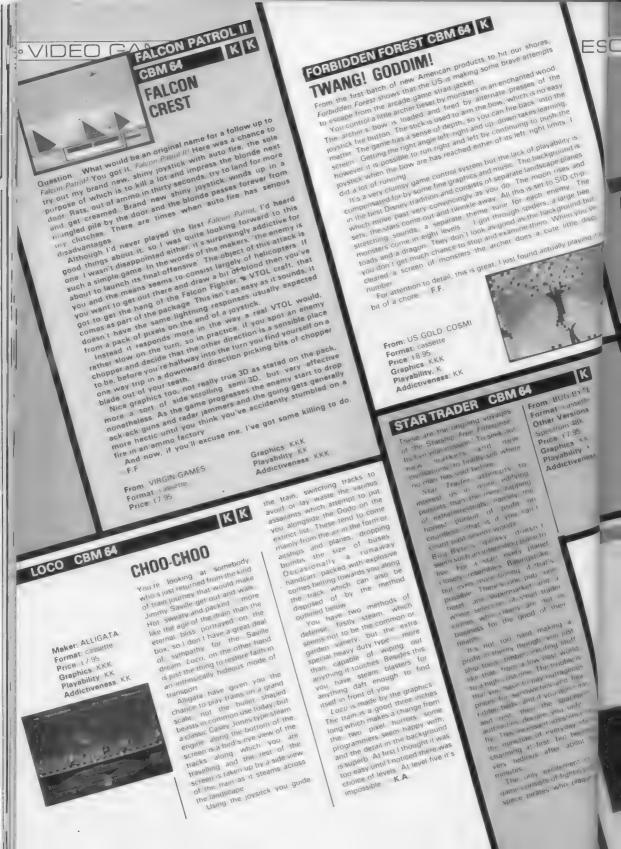
m Hwes-Tsee Tue been sent to help you. While you were in the forest evil you. While you were in the forest suilagers condors ettacked and took the villagers into the east

.KING ARTHUR'S QUEST. Since above review was written a full and combishensine mannal has anone textiam was mirror a resi been received. Ed.

Virtually identical to King Arthur's Quest in almost every respect, except, of course, for the scenario. This time you're an AZEC Who finds that his follow willagers have been hi lacked by whather have been reflected and condors and the sun has failed to tise Natch, it's up to you to sort all this out and again, time is against you as your strangth ebos in the cold. As with Quest, you get an overlay and very brief online and have to work outine and have to work everything out for yourself J.C.

From: HILL MACGIBBON Format Cassette Price 17 95 Graphics: KK Playability KK Addictiveness: KK



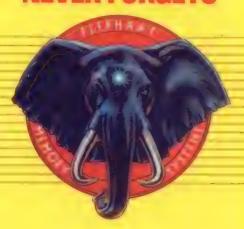








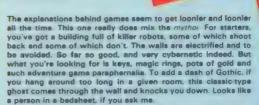
#### ELEPHANT NEVER FORGETS



#### VIDEO GAMES

CYBERTRON MISSION CBM

## A VITAL PART IS MYTHING



Movement is under joystick control, and you can fire back in the direction of movement. The gun is unfortunately rather low-slung, so the little man you control seems to be doing something you wouldn't expect in polite company. The maze ois a fair size, some sixteen rooms on each level, but I really found it a bit too zap-or-you-get-zapped. Certainly a strain of engaging eccentricity here, though. —F.F.

From: MICROPOWER
Format: cassette
Price: 66.95
Graphica: K
Playability: KK
Addictiveness: K



A trio of Egyptian Panic variants suitably awathed in rotting bandages and dunked in embelming fluid. The first is fairly pointiess to be honest, and merely involves digging a couple of holes in Tutankhamun's tomb in the hope that a crusty Glob (animated and angry) can be tempted up from the lower levels and then brained. It's little more than a ritual really, prior to entering the second levels 'n' ladders acreen, which is based on the standard Panic layout, here you must collect at least five of the randomly scattered cartouches (a kind of hieroglyphic notepad) from beneath the noses of prowling Globs, thereby being allowed entry into the third screen which puts you within sniffin' distance of your beloved endgeme sarcophagus.

Pheraph enough you might think! Unfortunately despite the promising scenario, this variation on a theme has little to commend it. The graphics are functional (i.e. not quite naff) and the game just happens to be an expert on all things Egyptian and have stacks of interesting Egyptian holiday snaps to show. Y'know, Keaton at the Sphinx, Keaton impersonating a sphinx, that kind of thing. There's even some Super 8 film somewhere! Now where did i put it all... — 8.K.

Maker: LOTHLORIEN Format: Papyrus scroll Price: £5.95 Graphics: K Playability: K Addictiveness: K

# REMEMBER



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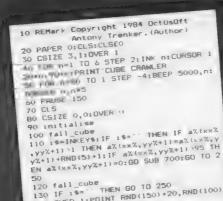


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140 OVER 1:PDINT RND(150)+20,RND(100)

150 fall\_cube 160 IF 19='2' THEN crawl\_left:80 TO 1

170 IF 16 "x" THEN crawl\_right:GO TO 100 180 IF 16='a' THEN go\_left:GO TO 100 190 IF 16='a' THEN go\_right:GO TO 100 200 IF 16='q' THEN jump\_left:GO TO 10 210 IF 18='w' THEN jump\_right:60 TO 1 220 fall cube 230 FF 16= 1 THEN big\_jump=1:jump\_le ft:big\_jump=0:jump\_left:GO TO 100 ft:big\_jump\_ri 240 IF 184 2' THEN big jump=1: jump\_ri ght:big\_jump=0:jump\_right 250 IF CODE(16)=192 THEN a%(xx%-1,yy% )=O:AT yyX,xyX-1:INF 2:PRINT":":INF :BEEP 10000,0,100,4,4:energy=energy-1 260 IF CODE (16) = 200 THEN a%(xx%+1,yy% ) =O:AT yy%,xx%+1:INK 2:PRINT": ":INK 7 :BEEP 10000,0,100,4,4:energy=energy-1 270 energymenergy-ltlF energy<0 THEN

> Zieft X:right A:E & W

> 1: hp let 2 hp rig





you\_die 280 fall\_cube 290 ATEO, 0, 0:PRINTEO, 'ENERGY ': INK £0, 7:PRINTEO, 3:PRINTEO, @nergy; ': INK £0, 7:PRINTEO "3:PRINTEO, energy; "::INKEO, 7:PRINTEO , TIME ";:INKEO, 5:PRINTEO, DATES:INK EO,7:IF a%(xx%,yy%+1)>1 THEN PRINTEO, HARD :::INKEO,2:PRINTEO,100-a%(xx% · yy%+1); 's INKEO, 7 310 DEFine PROCedure crawl left 320 IF aZ(xxZ-1,yyZ+1) THEN BEEP 10,Z 330 AT yy%, xx%: PRINT ' :xx%-xx%-1:yy% 340 FOR n=5 TO 255 STEP 2018EEP 100, n 350 END DEFine 360 DEFine PROCedure crawl\_right 370 IF aX(xxX+1,yyX+1) THEN BEEP 10,2 380 AT yyx, xxx:PRINT ':xxx=xxx+1:yyx 390 FOR n=5 TO 255 STEP 20: BEEP 100, n 400 END DEFINE 420 DEFine PROCedure go\_left 430 IF xxX=0 THEN BEEP 10,2:RETurn 440 IF aX(xxx-1,yyx) THEN BEEP 10,2:R 450 AT yyz, xxXxPRINT ' 1XXX=XXX-1xyou FTUER 460 BEEP 100,25 470 80 TO 690 480 DEFine PROCedure go right 490 IF xxX=35 THEN BEEP 10,2:RETurn 500 IF aX(xxX+1,yyX) THEN BEEP 10,2:R 510 AT yyX, xxX:PRINT' ':xxX=xxX+1:you 520 BEEP 100,25 530 GO TO 690 540 DEFine PROCedure jump\_left 550 IF XXX=0 THEN BEEP 10,2:RETURN 560 IF aX(xxX-1,yyX-1)=2 THEN BEEP 99 9,0:energy=energy+RND(100)+100:a%(xx% 1, yyx-i)=1:INK S:AT yyX-1,xxX-1:PRIN 1 1 :OVER -1:AT yy%-1, xx%-1:PRINT'H': OVER 0: INK 7:80 TO 690 570 IF aX(xxX-1,yyX-1) THEN BEEP 10,2 580 AT YYZ, KKZ:PRINT ': KKZ=KKZ-1: YYZ =yy%-1: you 590 BEEP 100,25 600 IF big\_jump THEN RETURN 610 80 TO 690 620 DEFine PROCedure jump\_right 630 IF xxx=35 THEN BEEP 10,2:RETurn 640 IF aX(xxX+1,yyX-1)=2 THEN BEEP 99 9,0:energy=energy+RND(100)+100:a%(xx% +1,yyX-1)=1:INK S:AT yyX-1,xxX+1:PRIN T'I':OVER -1:AT yyX-1,xxX+1:PRINT'H': OVER 0: INK 7:80 TO 690 650 IF aX(xxX+1,yyX-1) THEN BEEP 10,2 660 AT YYX, XXX:PRINT ':XXX=XXX+1:YYX syx-1:you 670 BEEF 100,23 680 IF big\_jump THEN RETURN 690 IF a%(xx%,yy%+1) THEN RETURN 700 AT yy%,xx%1PRINT ':yyX=yyX+1:you 710 BEEP 5000, 10#yy2, 100, 2, 2, 0, 0, 0 720 GO TO 690 730 DEFine PROCedure fall\_cube 740 IF YX=yyX THEN IF XX=XXX THEN YOU 750 IF y%+1=yy% THEN IF x%=xx% THEN 6 nergy=energy=RND(10)-10:BEEP 500,255: az(xz,yz)=2:AT yz,xz:INK 5:PRINT 7':1 7:xX=RND(0 TO 35):yX=5:RETurn 760 IF a%(x%,y%+1) THEN a%(x%,y%)=5:8 EEP 1000, 100, 255, 8, 2, 0, 0, 15: X = RND(0 10 35): y%=0:RETurn 770 AT YX, XX: PRINT THE Y" = Y" + 1 BOO AT YX, XX:PRINT CHR6 (174) 810 INK 7 820 END DEFine 830 DEFine PROCedure you 840 AT YYZ, XXXI PRINT 850 DVER -1 B60 AT YYZ, XXX: PRINT 'A B70 OVER O 880 END DEFine 890 DEFine PROCedure initialise 900 big\_jump=0

Œ:

Web night

1: Bop left 2: Bop right





No. 9: PONG (Atari) By STEVE KEATON

# The blip-blap-blip That Saved A Generation

PEOPLE, UNLIKE CBMs, have poor memories, I mean, how many can recall the first video game?

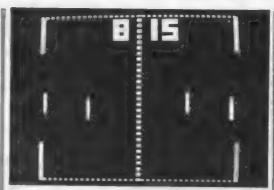
Come on now, really think about it. Rack that grey matter What would you say? Pac-Man? Leave the room immediately! Space Invaders? Go take a stint on Codename Mat! Pong? Well!

close but no cigar. The first marketed video game was in fact something called Computer Space! It appeared in November 71 and was distributed by nutting Associates of California. USA. Interesting, buh? It never set the world aflame though. The game bombed and fewer than 3,000 Computer Space machines were made. Its only surviving relative is an elderly VCS ROM called Space War. T'was hardly a classic

Pong was actually the second video game to hit the market But unlike Computer Space it struck gold. Radical and innovative (for the period) it proved instrumental in reshaping the planet's leisure habits. I mean, we're talking real history here! In these more enlightened times though, it may be difficult to imagine the kind of excitement that The Pong Machine generated. This absurdly modest slice of arcadia (black & white display, no-res graphics) drained the pockets of

#### **VERTICAL**

It was essentially a two-player game that involved waving a short, thick vertical line (known in the trade as a paddie) frantically about in an attempt to deflect a tiny white dot travelling across the screen. Play was purely defensive You didn't so much hit the ball as allow it to rebound off you paddle and return to your opponent's side Points were scored (negatively).



every time a hall was missed The first to score fifteen points won. Hey, don't scoff Expert Ponysters could estimate the speed of an approaching ball. calculate its trajectory and predict the optimum deflection point all within the twinkling of an experienced eye. contrasted dramatically with those casual players who could often be seen spinning their control knobs about in a desperate attempt to create a solid, impenetrable paddle wall The tactic looked good of course, but never worked

It's impossible to calculate exactly how many Pong machines eventually made if onto the market. Copies and variants proliferated in the arcades and it soon invaded the home as well via a number of small, dedicated Telly Pongs Many a tennis image was indelibly etched into the tube of an unsuspecting TV. My Pong was the Grandstand match of the Day 2000. As you m ight imgagine this was no run of the mill unit No sir, this was a deluxe version capable of not only Tennis Pong, but Squash and Footer Pong tool The thing had a brain the

size of a planet Durable too Imagine my surprise when dusting off the ancient beast if discovered that it was not only still alive but anxious to thrash the pants off mel I don't mind saying that after years of slugging it out with increasingly sophisticated playware this simple creature stomped me well and truly into the ground, it actually stands the test of time well and would certainly earn a triple K addictiveness rating were it to come under review again.

#### BUSHNELL

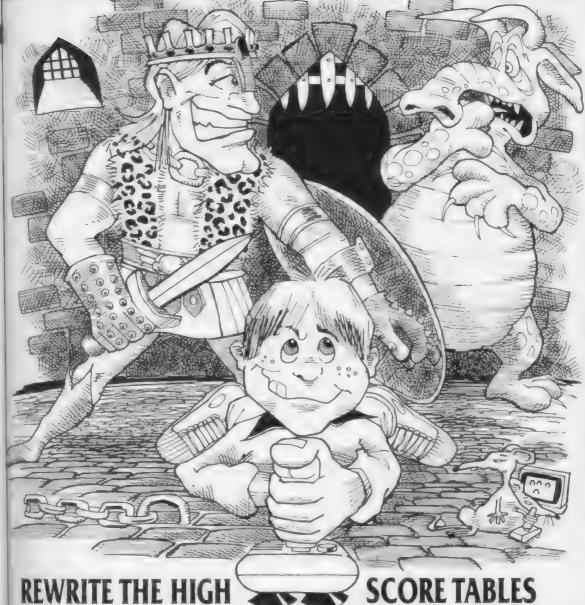
Pong was also the game that scrawled the name of Nolan Bushnell indelibly into the annals of Komputer Kulture and estabished Atari as a multimillion dollar company. Popular legend has it that Bushnell (born on February 5 1943 to Mormon parents in Odden, Utah), along with fellow electrical engineer Ted Dabney, created Pong sometime around November '72 Legend also credits them with devising its predecessor, Computer Space. With barely a cent to their name, they formed company called Syzygy, changed it to Atan, launched

Pong and then sat bug-eyed as the bread began to roll in. Four years later Bushnell sold Atari to Warner Communications for around 30 million greenbacks Imuch to their eternal regret) and the rest is pretty much vid

However while Bushnell and Dabney were indesputably instrumental in putting both Pong and Computer Space into arcades, I personally think it kinda doubtful that they ever really created it. The earliest tennis game that I know of was actually invented by a bespectacled boffin called William Higiphotham Back 1958 Willy produced a version that ran on an Oscilloscope Brookhaven National Laboratory in Upton, New This Pong Yorkl beat Bushnell's by more than a decade. Higinbotham's other main claim to fame involved devising the timing circuits of the first atomic bomb (not a lot of people know that! Similarly my files detail a Space variant Computer known as Spacewar making an appearance back in 1962 at an MIT open house, it apparently ran on an old crock called a PDP-1 which sprawled across a continent vet was hard pressed to deliver more than 9K! The roots of Pong are clearly long and varied

#### PIZZA

The last I heard of Nolan Bushnell he was head honcho of Pizza Time Theatre, a fast food chain boasting a huge grey rodent mascot called Chuck E Cheese. Kind of appropriate, I'm sure you'll agree



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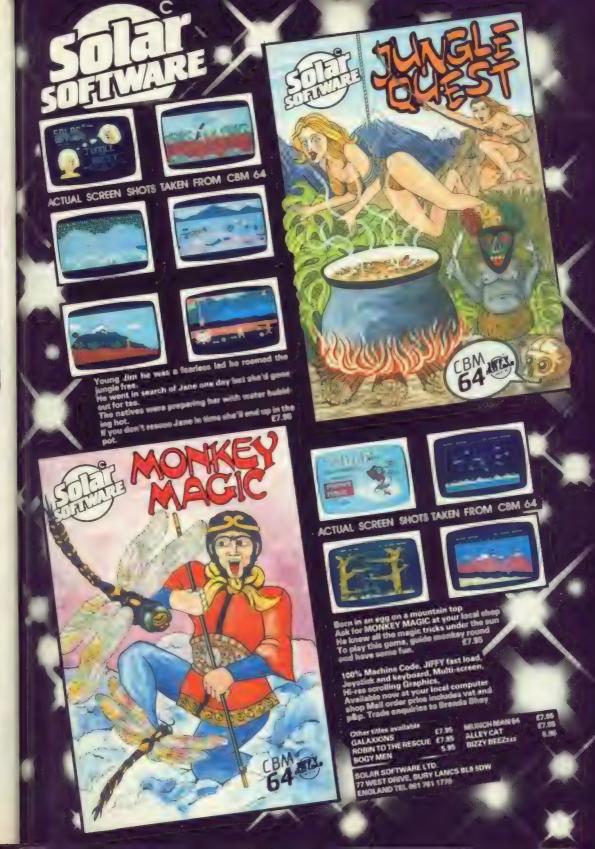
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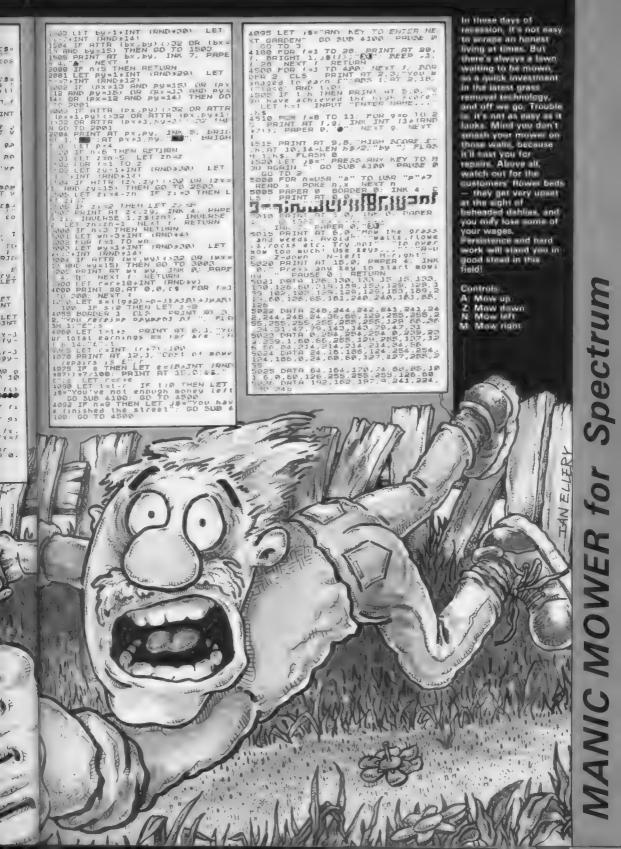
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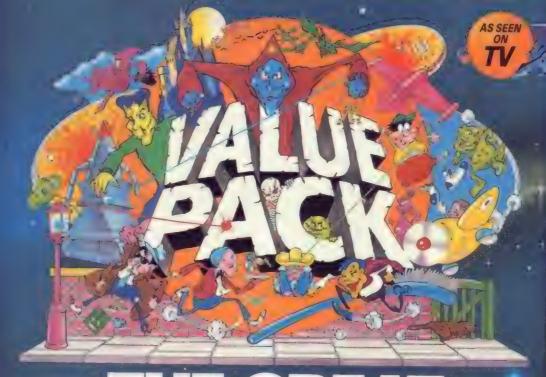


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## THE GREAT COMPUTER GAMES

PACK



#### **COMMODORE 64**

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## Probably The Best Soundchip Of All Time'

The CBM 64 sound chip ('SID') has been getting a lot of attention lately - and not without reason. BILL BENNETT reviews a selection of commercial tunesmith packages for the 64 (pages 51-54), while KIM ALDIS wraps up his assessment of SID's architecture (page 54).

COMMODORE'S SID chip is probably the best piece of music hardware available anywhere on today's low-cost computers. However most people have difficulty coming to grips with the 'synth on a chip' because of the naff Basic on the 64.So micro-computing musos have two options: learn machine code programming, or buy a software package to coax sound from the

I laoked at four commercial packages, and discovered that they have a surprising number of comm n features. At the packages cost a little more than you normally expect to pay for software. Utilities often come at a premium price. All of the packages go in for interesting user interfaces - in most cases laying out the facilities of the SID thin in a style that approximates hi a synthesiser panel. And all the packages go in for using the qwerty keyboard as a kind of mock-piano

This last feature is really

annoying. programmers who designed this software can't be musicians, as a writer, I can find my way around a typewriter keyboard quite adequately. As a spare time musician I can just about find my way around a pieno keyboard. But the two are very different beasts and should remain separate. Even Elton John would

you would expect Musicalc to be pretty radical. Fortunately, it is

#### PACKAGING FIT FOR A KING

MUSICALC COMES on disc. but the distributors promise a cassette version some time in the near future. This should cost less

'Musicale may look like the world's first coffee-table software pack, but it really IS impressive'

be put off his stride if he had to play a typewriter instead of a piano, and I doubt if Barry Manilow could see a computer keyboard over his nose.

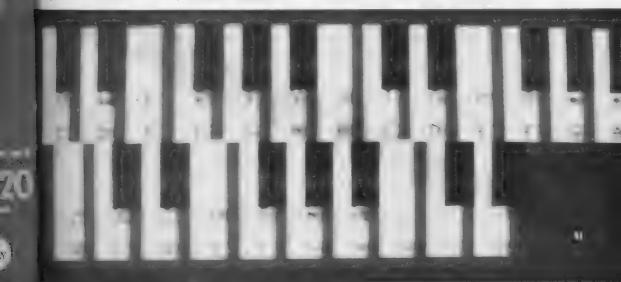
Of all the packages, the best is Musicale It isn't only the best musical software for the 64, it is also the most comprehensive, but more to the point it is very expensive. Costing around £50,

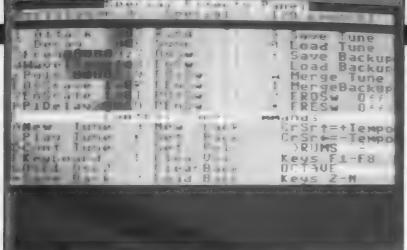
and open up the package to a wider audience. Its packaging is sumptuous, which goes some way towards justifying the high cost. The whole caboodle is wrapped in a full colour gatefold. sleeve much the same as a half size record cover Inside is a manual, or rather a small book, which, like the sleeve, is well designed as well as useful. The

floopy disc itself has photographic case the cover to sits in being made of clear plastic software's answer to the picture disc. A quick reference card and a warranty slip make up the rest of the contents

In many ways Musicale can be described as the world's first coffee table software package By this I mean it has a high pose value. Leave Musicale lying around, and invite your computerist chums around before long they'll notice it and be suitably impressed. Not only does Musicule took impressive, either sitting in its packaging, or on the screen, it actually is impressive

Musicalc's front panel is a tnumph of ergonomics - the art of squeezing a quart into a pint pot. It not only contains a complete visual display of the state of play regarding SID's registers, but it also shows a representation of the three voices sauntering through the sequencer section. Three





ROMIK'S MULTISOUND SYNTHESIZER: converted from a Vic program.

coloured squares dance around the right-hand section of the screen in measmerising patterns, and provided the TV volume, and the SID chip volume are both activated, three-part music caresses your lug-holes

#### IS THIS THE DEATH OF THE RECORD PLAYER?

APPARENTLY in the US you can now buy albums of music to use with Musicali: They simply load in as data files, and play for you. There is even one such album of Christmas carols Personally I think this is totally missing the point about such a package; after all, good though the SID chip may be, it isn't likely to replace the record player or radio in a hurry. If your musical taste is Beethoven or The Birdie Song, the fun of Musicalc is entering the music yourself, and designing the voices to play it

known as patching the synthesiser. I like to use Musicalc as a composing tool, and on the whole it is very good. There are certain limitations but these are for the most part hardware

limitations rather than any faults in Musicalc

It is possible to create fairly convincing drum rhythms on one voice, a bass line on a second and a lead part on the third. As a composing tool this is fine, but I wish there were a few more voices. I like to write my music using chords, and many chords (such as sevenths) require four voices. And you still need the bass and drums on top of that Oh for a better synthesiser chip Musicalc takes a long time to load, even though it comes on disc. Musicalc files — that is the

discs, but this also takes a long time. *Musicalc* files are also very large, and you can't store very many on a disc

#### SON OF MUSICALC

Musicalc is a complete package in itself, yet the world of Musicalc is open ended Son of Musicalc or Musicalc 2, as the publisher calls it, allows sequences to be strung together and provides a printing facility as well as a sync pulse which sends

'You can now buy albums of music for use with Musicalc — they load as data files'

music you compose together with the synthesiser patches can be saved and loaded to from

out pulses to a drum machine or synthesiser allowing the two instruments to play together. The printing facility is a bit disappointing; it should allow

Musicalc files to be printed as sheet music, but it only works in conjunction with an obscure Vic Printer which almost no-one owns or with an Epson via an obscure interface Still as a consolation, your musical endeavours still get immortalised on screen. Other expansions are in the pipeline, including a MIDI interface, and some drum patterns for you to build songs around There is also a Musicalc user group, which provides support for the products, and offers a discount on some of them

#### ROLL OVER BEETHOVEN

COMMODORE'S VERY own Music Composer is a different kettle of fish altogether Supplied on certridge, this package is not the most impressive piece of software and in no way an advertisement for Commodore's product However, it is not expensive at around £10, and has the advantage of being a carridge and thus loads in an instant Simply shove it in the back of your 64, and hit me baby eight beats to the bar.

Of course if you forget to turn your computer off, then you could have a disaster on your hands. I might have felt more charitable about the program had the documentation been better, but my copy came with a very inadequate little booklet. I get the impression that Commodore think users are all psychic

Once the computer is switched on, a menu confronts you, but there is no wealth of options open here. I sometimes





MULTISOUND SYNTHESIZER'S terribly friendly front panel, with synth-style sliders and faders

wonder about Commodure products. After all, the facilities offered on this cartridge are no more than most manufacturers would supply as part of BASIC However, just to prove that the programmers at Commodore are hip to the beat of the street, an example tune has been included to show off the software. What harmonic confection did these in cats choose to massage our train cells with? Kaima Chan eleon, Two Tribes? Not a bit of it, those cheeky Commodore hipsters chose Jesu, Joy of Man's Desiring'. (Johann Sebastian) Crazy, man,

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#### USER HOSTILE SOFTWARE

MUSIC COMPOSER isn't going to set anyone's pulse racing -'s a rare example of a user first in program. Using the weird se'n programming language to write three-part tunes is not easy. Especially as you have to perform mental gymnastics to synchronise the three voices properly. I'm sure that it would be owner to parn machine code programming to produce music that use this package. Stol 1 persevered and managed to work my way through the OMD songbook converting Enola Gay to weirdo-code adequately though Only entered the songs played well enough, but it took he ages. I spent a year playing. a 'n 'he Music Composer one afternoon.

Mass Composer isn't all that hot on the patching front either. Its the preset cores are in lactors at all twas to be seed by the way that of the distribution distribution distributions the seed by the way that of the distribution distributions the core across the seed to be seed to be

(a) CHOOSE IMSTRUMENTS
(b) PLAY SAMPLE
(c) KEYBOARD PIANO
(c) KEYBOARD PIANO
(d) EDIT SONG
(d) EDIT SONG
(d) LOAD SONG
(e) LOAD SONG
(f) SAUE SONG

YOUR CHOICE ?4
EDIT
8010 U1EU2HGU1E V2NGU1BU2DV1BU2D
8010 U1EU2HGU1F V2NGU1BU2DV1BU2D

Despite the top line on the screen, this package is actually called Music Master Music composed can be saved and later used in BASIC programs

screen in sheet music form as the computer tables those sition wones. But it passes a little too quickly for me to sight read and accompany.

I get the impression that Music Composer is an unfinished symphony. At least the edges haven t been polished yet. One use it, but will you be able to do anything with it?

#### THE BITTEREST PILL

MUSIC MASTER from Supersoft comes on cassette

'I'm sure it would be easier to learn machine code to make music than produce this package'

example of this is the keyboardplar o mode. Nowhere in the screen, or in the so-called manual, is there any indication as to which key is which. The manual claims that "absolutely no musical" abody or computer background is required to play this carridge. Esuppose not, but that is like saying ne computer background is required to use an Assembler. You may be able to with no fast-loader, so in the time. I took to load. I made a cup of tea. And some toost. This program is the mostcall equivalent of a ward processor. I think that a little modest; Music Master is quite Universent to use. — most Commodere 84 work processors aren 1.1 like Massic Master. It has one absorutely brilliant feature that I haven't found on any of the

other packages — it allows you to complise mase when you can subsequently use from your own Basic programmers, utility a musical programmers, utility. This alone makes it identifies though the £17.95 price tag is a bitter pall to swallow.

I didn't must care for the booklet, being pompous and impenetrable - the booklet, that s. Though work and and section full of ideas for making Strange sounds and a triciber shooting section. Although the review program came on cassette, it did allow me to save the fruits of my labour to diswhich is always a sign of some thought on behalf of the programmer. Things a did find that transferring sheret music to this system was not easy. This is because mas thas to be intered via the keyboard, but as though yo were player, a player Stirlin the whole Masic Maste is a good too. and while it is a life. expensive tions isn't anything





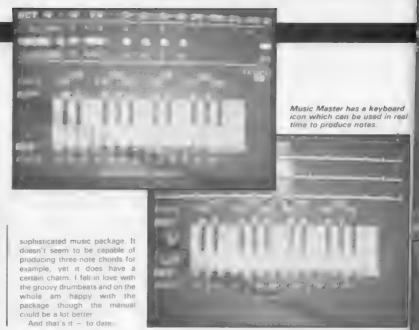
Music Master's trouble shooting screen

else around that will convert your musical meanderings to Basic

#### A GOLDEN OLDIE

MULTISOUND Synthesiser is a rework of a similar program that used to be available for the Vic 20. It resembles the other packages in that it has two main sections: a synthesiser style front panel, and a record playback facility. I like the way the panel works, with sliders like a real old fashioned synth - modern ones are all LEDs. In this way Multisound resembles the upmarket Musicalc package. When you play in piano mode, the piano keys appear on the screen, and a little dot bounces around indicating just which key you have hit. It reminds me of when a dot appears over the words of a song on the TV screen

Multisound is not the most



### ...And More On SID Himself

By KIM ALDIS

IF YOU remember, last time round we jumped up and down on Sidney to make him belch and warble. This time we're going to stomp on him some more in an attempt to make him belch and warble politely.

So far controls for envelope, volume, waveform and pitch have been dealt with but there are a few other registers, plus bits of ones we've already looked at, for altering the character of the sound.

Having reached the stage where we can control the way a sound starts and the direction it takes on its way to the finish, we can look at techniques for changing the nature of the sound. Consider the difference between the notes made on a piano and those made on a violin. Even if you pick the same frequency (note) from each. they still sound different. The reason for this is largely to do with harmonics. waveform is made from several 'sub' waveforms which all total together to make a sound unique to that

Basically — not much of a pun considering the state of Big Comm BASIC — there are two ways of introducing a certain amount of harmonic overtone to Sidney. Apart from saying 'here is a certain amount of harmonic overtone', there's synchronisation and ring modulation.

Synchronisation is fairly straightforward. Just take two frequenceis and logically AND them together for your note. In Sidney's case you can take either of the first two voices and synch them with the frequency from voice three. The result goes through whichever voice you've selected, so, to take voice one as an example, shove a frequency into the frequency register of voice three (SID + 14 and SID + 15), another into frequency voice 1 (SID + 0 and SID + 1), set bit two of the control register voice 1 (SID + 4) and start your sound as described in the previous part of this feature. (For details see prog 1.)

Ring modulation is slightly different. It takes the waveform of the selected voice and combines it in 'ring modulated' form with the waveform of voice 3. On the Commodore it only works with a triangular waveform on the selected voice. Again the method is quite simple: tet a triangular waveform into voice one (SID+4) and at the

same time set bit 3 of SID + 4 (i.e., put 16+ 4 into it) and set the sound off. The result can be quite strange, sort of two notes at the same time. Prog 2 gives some indication of how it's done.

The final and most versatile way of screwing around with Sid is filtering. This sounds like a dumb thing to do with sound but in fact it refers to the filtering of frequency. In other words in a given sound you can filter out all frequencies within a given range.

There are three types of filter in the Commodore. High pass — which allows only high frequencies through; low pass — which does likewise for low frequencies; and bandpass — which lets through a chunk somewhere in the middle.

The point at which the frequencies are cut off is controlled by register 22 and the bottom three bits of register 21, high pass meaning it passes everything above the cut-off point, low pass everything below and bend pass allowing through everything within a range to either side of the cut-off.

Whether filtering is active or not is decided by the bottom three bits of register 23, one for each voice, and which filter is active by bits 5, 6 and 7 or register 24. Again the same kind of procedure is followed: enable filtering voice 1 by poking a 1 into register 23, pick a filter by setting the appropriate bit of register 24, not forgetting that this one has your cut-off point in registers 21 and 22 and finally make a sound (see prog 3).

The best way of finding out about the kind of sounds you can make on the Commodore is by listening to them, which is where the final listing comes in. It gives a constant display of all the parameters they're changed. Frequencies for voice one and three (FREQ1 and FREQ3) which are changed using the function keys f5, f7 and f6, f8. Filtering, synch and ring modulation are toggled on and off with keys F, S and R respectively. Waveform is changed with the W key, filter type is selected with H. L and B for high, low and band pass filters. Finally, the cut-off point for filtering is changed by f1. pressing any key plays a note.

Now get in there, crank up the volume, waken the neighbours and send the cat screaming, down the stairs. With luck it will trip up the rent man and you'll never see him again.



# A PICTURE WORTH A THO

Are Verbals just Burbles? Could Words Be For the KTD tuts loudly and exits. Birds? Is Text Ex? Our Man with the ink-stained eyeballs takes up the cudgels for CHAR\$ ...

KEATON THE DORKSLAYER was roused from his customary mid-morning slumber by the office Orc. 'Master! Master!' it cried, tugging frantically at his bootstraps. 'The adventure game is dead. Text-only has gone down the pan, and the rest will surely follow! Calamity! Calamityl

Naturally Keaton was perplexed. After a short pause he retorted: 'Don't be stupid, Orc! Adventures are plentiful, and text games have never been more popular!' To emphasise the point he best the foolish creature rapidly about the head with the office QL

The diminutive green Orc appeared unconvinced. 'Go out and buy one then!' it challenged defiantly. 'Go out and buy a text adventurel' Keaton the Dorkslayer had little choice but to comply. The QL bounced into a corner. Some hours later KTC could be found carefully

perusing the computer department of his local WH Smith mega-store. Much to his horror the Orc appeared to be

correct! Surely, he thought, there must be a text adventure around here somewhere? But no! The only adventure progs he could find were The Hulk and Avaion (for the 48K Spectrum) and Valhalla, Oracle's Cave and The Mystery of Munroe Manner (for the CBM64). After wading through mountains of (largely ancient) arcadia he threw down his broadsword in disgust and stomped across to bespectacled assistant. An exchange followed

KTD (forcefully): 'I'm looking for a good text adventure!"

Assistant (somewhat taken abackl: 'Text? Why do you want

KTD (rather sweepingly) 'Because they're better, of course

Assistant (thoughtfully): "Why don't you try Sabre Wull? That's a good 'un!'

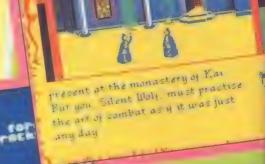
Chain store rivals Boots (the chemist) were marginally better stocked. A fair range of Melbourne House games littered the Spectrum and Commodore shelves, while the Dan Diamond trilogy awaited unsuspecting BBC owners. For Dragon fans there was the Ring of Darkness. After evaluating the goods he once again approached an assistant:

KTD (charmingly): 'Cen you recommend a good text adventure for the Sprctrum, my man?

Assistant (helpfully): 'Certainly sirl'[Promptly produces a copy of the decidedly text-less Avalon:) 'This is very popular!' KTD: 'Buffoon

it took a specialist computer parlour finally to restore his faith They offered to order whatever took his fancy, the situation, though, was clearly grim. He owed the Orc an apology

Don Stevenson of Runesoft 'It's becoming very difficult to sell text adventures, particularly through the big retail chains. I mean when they consider Atic Atac to be an adventure game. real adventures stand no chance think the market will eventually return to direct sales. The man



order market. I doubt if you'll be able to find any adventures in the big shops soon. You'll have to buy them through Adventure Clubs or through specialist magazines.

Howard Gilberts of Gilsoft agrees: 'Frankly I think the real adventure market is going to go mail order unless the distributors wake up. We've had problems getting our Gold collection properly distributed. W.H. Smith refused to touch them, simply because they're text! Only a few of the more knowledgeable distributors were interested. We've just produced The Illustrator, a graphics utility for our Quill system, but I would hope, in my heart of hearts, that it doesn't work to the detriment

Steve Keaton's Adventure Column

computer visuals, no matter what the quality. I think really we now have a split field now, with younger consumers going entirely for graphics

So, you may well ask, what's the big deal? Why's the Dorksleyer so steamed up? A fair question. To which there are several answers. It doesn't take a genius to work out that graphics cost memory. The mane impressive the artwork the smaller the adventure. This means fewer puzzles, thinner descriptions and a diminished play area. Less stimulation in other words. In the long term they MAY lead to a stifling of development. Literate text adventures, with a semblance of intelligence and hyper-complex input routines (all quite possible) ere unlikely to see the light of day il companies are unable to market them!

Melbourne House: 'With Sherlock we were faced with a very clear choice. We could either have made it exceptionally descriptive and even more sophisticated, or we could add graphics. We were advised that if we wanted to reach a mass market then we would have to include graphics. Apparently lots

adventures are of more interest intially, they have more impact although they do tend to sacrifice ease of play for the visuals. We think a well written adventure like Velnor's Lak stands up equally well against its graphic equivalent, but it would certainly be more of an uphill struggle to sell it. Really text-only is very much a purist attitude. I think that the average consumer wants to see graphics. You just have to look at the sales figures.

The attitude of W.H. Smith on the subject is clear: Graphics means progress. They told Dorkslayeri: 'The adventure market has become more sophisticated over the years and the type of text adventure that first appeared has been replaced by higher quality graphic adventures. The only text adventures we currently stock are for the BBC machine. And that's because it has such a small

It's an opinion to which Adventure International (founder: Scott Adams) are sympathetic. 'The introduction of graphics has dramatically widened the market,' they declared. 'Especially graphics of such exceptional quality as ours. We know a lot of real adventurers don't like them, but

really the text-only adventure has gone. The multiples are only really interested in taking graphics. At the moment we're working on reducing the size of our databases with regard to putting graphics on the BBC And we plan to introduce animated graphics to the Marvel Camanas Questprobe series eventually

Animated graphics? Animated adventures? We already have them. They're called arcade games! It seems that the future of adventure games (in the UK at is pretty much mapped out. I guess Dorkslayers can only glance in envy at the States and

am of Infocom, the company have taken the text adventure into new areas of sophistication.

We have absolutely no plans to introduce graphics into our adventures,' Spencer Steere of Infocom told us. 'Our philosophy is that a mental image is far more vivid than any computer graphic. We see our product as oxeraseme fiction. There's no need for illustrations. The Zork trilogy never suffered from lack of graphical If anything we believe the current trend in the US is towards more literate text adventures rather than any increase in graphics.

Back in the office, both the Dorkslayer and the Orc wept quietly for the vanishing adventure

DEGINNERS START HERE

OK. So you've got your micro and you wanna check out these weird things called 'adventures'. Only the whole business is more than a tad confusing, right? Well puzzie ne more friende, 'cos here's the Dorkslayer hit Net, six quality proge guaranteed to enthrall and entertain all fledgling explorers. They're bright, accessible and mucho fun:

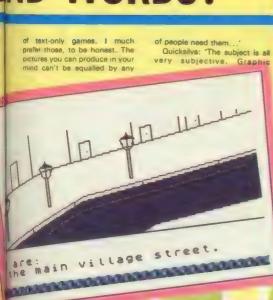
CLASSIC ADVENTURE from Melbourne House 6.55 Ifor the BBC B, 48K Spectrum and Commodore 64 Great version of the original advanture scenario. in which you bettle dragons and bribe trolls. Occasionally tricky, but the problems have been well documented so you shouldn't stay stureped for long. AFRICA GARDENS from Glisoft 5.50 (for the

Commodore 64 and 48K Spectrum). Old dark house mystery, full of creeking portals and wretched cobwebs, not to be played alone as it positively drips. Stmosphere. Splendidly spooky.

VELNOR'S LAIR from Quickstive 8.96 (for the Orio Atmos and 48K Spectrum). Cult sword and sorcery romp that's both mildly devious and deliciously addictive. Hunt down the evil wizard Veinor. Befriend the dwarves. Puzzle over the crocodiles. Nest

ADVENTURELAND from Adventure international 8.56 (for the Atari) range, Commodore 64 and 48K Spectrum). The first of the legendary Scott Adams series, considerably easier than most although still toughlish). Also interesting from an historic point of view. A good title to drop at perties.

SPOOF from Runsoft 5.50 (for the 45K Spectrum of Commodors 64). Hilarious lampoon of the standard adventure quest, full of witty repartse and totally daft situations. Don't till the Dragon though



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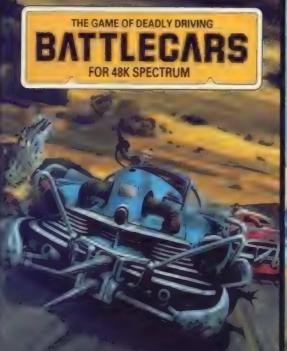
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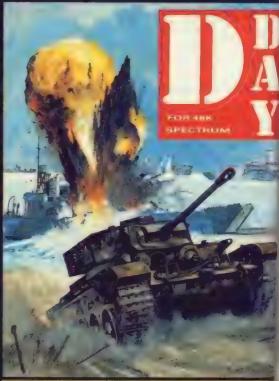
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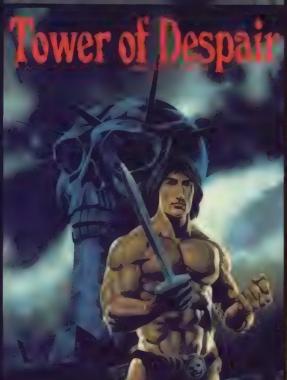
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D-DAY is a superb grawargame based on the it mandy landings of 1944. It players take the Allied

German sides, battling through four seperate scenarios. D-DAY offen enduring tactical challenge to players tired of simple arcade action. In TOWER OF DESPAIR, Games Workshop has used its ten years of exence in role playing games to create an outstanding adventure. It incluit two entire 48K programs, and a guide containing a history, map, and intented thies.

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#### CONTINUED FROM P.57

#### DORKSLAYER

#### LOOK WEST, YOUNG MAN

Know, O prince, that when the land was grey with pagan ways and cursed with pungent sanitation there evolved a race of wily manthings who became known as the Sidhe. It was they, who with monstrous wit (and the holy Seal of Calum) captured the Great Enemy, the Master Worm. and cast him into a grim and icy abyss, thus bringing about the dawn of a bright new age (credit where credit's due). The Master Worm was naturally piqued at this development and vowed to destroy the Seal of Calum and stomp the godly Sidhe into the ground! As is the way of legend the Worm wasn't just whistling Dixie. There followed a terrible battle that climaxed with evil walking the Earth once more and both Sidhe and Seal being cast down into the underworld of Tir Nan Nog. Know also, O prince, that somewhile later the great Celtic hero, Cuchulainn (also snown as Sedanta, Culan's hard or just plain Cucu) travelled to Tir Na Nog (via the keyboard) in search of the "ittered Seal. His quest wing to bring together the regments and reunite them, thereby lightening the burdens of the world and ensuring his own everlasting 7' which seems a fair tough reason to me).

Thus begins unquestionably impressive new episode in the controversial annals of the animated adventure. Combining both full-scale animation and mammoth play area with (recognisable) random/vaguely intelligent cast, Gargoyle Games' Tir Na Nog actually delivers ......hing that Valhalla seed. I mean, you don't no to peer painfully at a of undistinguishable black blots here. The central character of Cucu stands a full 56 pixels tall and comes complete with grimace and matted hair! The screen display offers you four "terent camera angles

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DORE 64

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the land of Nog - as well as displaying both a compass and inventory list. The animation of all the characters is quite superb Cucu shambles about with a realistically smooth gait, hair blowing dramatically in the wind and Nog's drooling denizens are a delight to behold. However, don't expect to complete it in a week. My version was only a pre-production model, smaller in size and less baffling than the final program, with prize items tkeys for locked doors and fragments of the Seal) readily available yet even in this simplified form, it presented a number of headaches. how to avoid the shambling Sidhe (now reduced to simian appearance following the loss of the Seal) for example? 'Twas enough make a grown man weep. Needless to say I'm hooked. A full blown Cuchulainn should be shambling past your way soon. Don't fail to check him out. -S.K.

"Valkyrie 17 is up and running." — "Do what?"

Valkyrie '17 From Ram Jam Corporation, For Commodore 64 (£9.99) and Spectrum 48K (£9.99).

Nifty first offering from Ram-Jam. A 'Fairly Secret Army' adventure that's not only devious but cloaked in a quite ludicrous sense of humour. Apparently Valkyrie 17, the Nazi's ultimate weapon has been reactivated! Information has been leaked into your ansaphone (the messages are on the back-side of the tape) and air tickets to Munich have been stuffed down your jockey shorts. Not surprisingly things begin move at a sprightly pace.

On my first mission, having transferred to the Hotel Glitz (y'know the one, it overlooks lake Bruntz), I found myself clad in black silk dress and

blonde wig (just mind your own business, OK7), propositioned at the bar, molested by the hotel manager and endangered on a window ledge. Not a bad morning's work, I'm sure you'll agree.

Rather cleverly Ram Jam have sated the market's irrational demand for graphics by alternating visuals with some highly detailed text (both of which appear in a window at the top of the screen), and there's a handy 'Save to Microdrive' option, which is a more than welcome innovation. Indeed, in many ways it's hard to fault this debut from Ram-Jam. Dorkslayers on the run from Orcs are unlikely to find a more entertaining adventure alternative. The Red Kipper flies at midnight, they tell me. Best catch this while you can.





# 

MOV 2

HE WROTE ONE...

## Con't Step On My Gucci Shoes

NICKY XIKLUNA talks to RICHARD CLARKE, Bubble Bus's rising star.

RICHARD CLARKE is just the kind of person needed to dispel the myth that a programmer is a kind of amorphous, whirling pillar of dandruff and spectacles encased in a shiny nylon anorak, which causes a constant crackle of static as he walks

Richard sports a Lecoste shirt in a stripe, neat and nerrow in red, blue and white. His similarly expensive italian Fila jacket is carefully chosen to carry on the exact stripe and colour in

concentric circles around his body.

Richard (alias 'Mini'), left school this year to become a full-time Bubble Bus programmer. He is seventeen (only just) and has two Commodore titles under his (probably Gucci) belt—Bumping Buggies and Cave Fighter. His games have been translated into German and Dutch. The working title of his current game is Speedboat Racer. Bubble Bus hope to have egged him on enough to have it in the market later this month.

Bumping Buggies are sort of

racing bumper cars. Instead of crashing, you shove other cars off the track. Or jump over them along with other obstacles. (There's a nice 3D effect here your jumping car appears to lurch out of the screen at you as you look on from above). Cave Fighter is a Manic Miner-style game with 31 levels and 16 monsters. The sundry prtfalls multiply as you progress, as do the precanous ledges. At about the nineteenth screen these become so small that it's like trying to balance on stilts in size twelve boots. Richard's graphics and action - like his clothes



can shoot to kill in all directions But what about the one that's bubbling under?

'It's a Pole Position-style game. You have to compete with other boats around a course of rocks, flags and vanous signs in order to qualify. I'm enjoying writing it.'

How did he begin?

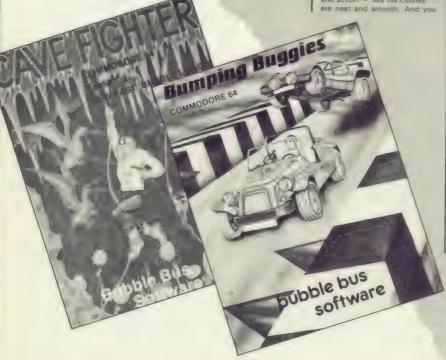
'About three years ago the games on the market were so terrible and boring that they prompted you to write your own I wanted to learn at school. But we spent more time in the classroom than on the computers. I knew more than my teachers did. Straight up! We did an awful lot on punch cards. No programming. More like history lessons really.

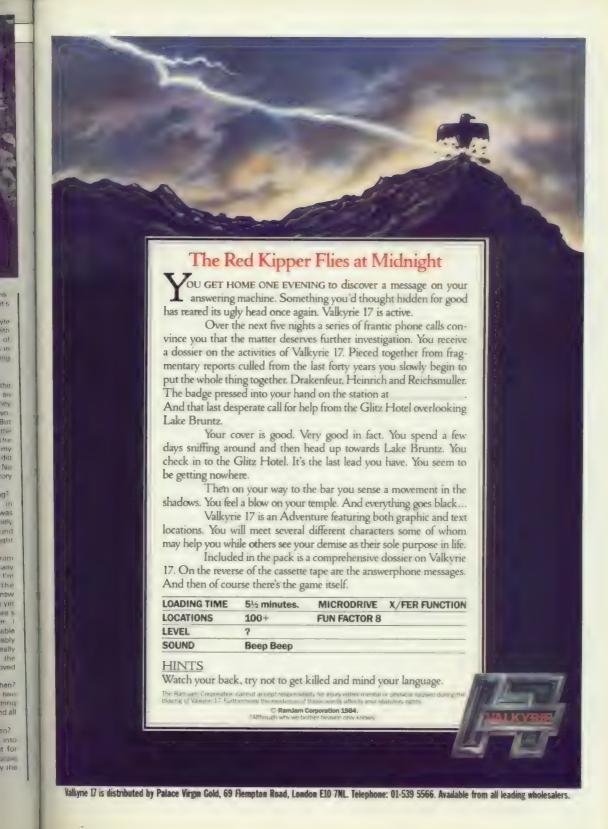
And the first published prog? is saw a new shop in Tonbridge and went in. It was Bubble Bus. They were a friendly lot and showed me around anyway. Later they bought Burnping Buggies.

Will he be branching out from the Commodore to write for any of the new machines? I'm disappointed with the newcomers. I think that new should mean better. Nothing yet has surpassed the Commodore's sprites and sound. However, I think that MSX is a passable games machine, and I'll probably write for that. But then, it's really the same video chip as the Texes, with slightly improved sound.

So what's his dreaming, then? 'Um...an Apple IIE with two disc drives and...everything else. Especially a modern. And all American software.'

Fancy a bit of hacking then? 'Oh yeah. I'd like to break into a missile defence base. Not for sabotage reasons, but because it's the most difficult. I fancy the sheer challenge.'





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# How to teach your Micro a thing or two

Thousands of home computer owners have yet to discover their microcomputer's potential to help with many of the problems and decisions that come up every day in the home or office.

Perhaps you have always promised yourself that you would teach yourself programming, but have been put off by manuals which seem to assume a lifetime spent studying computer science and mathematics. Maybe you have looked at other computer books, but have yet to find one which is free of unnecessary jargon or where the program examples bear some relevance to real life and not space invaders.

Relax, your search is over.

The 'Learn BASIC' tutorials from Logic 3 are the latest development of a teaching method pioneered by Professor Andrew Colin and perfected by testing on 3 generations of students at Strathclyde University. The 'Strathclyde Method' has been translated into 8 languages and used by over 300,000 microcomputer users.

'Learn BASIC' is a jargon free, step by step, course in computer programming, which explains everything clearly in English, not computer talk. In a matter of hours you will be writing your first programs.

'Learn BASIC' is designed for people who want to keep abreast of the computer age, for people who realise that understanding computers is a key to future success at work, at school, and as a parent.

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# ECOME MOLF

BIG K invites you to take on the role of Lone Wolf, hero of the ace new Arrow adventure games, Flight from the Dark and Fire on the Water. Your judgement is needed to assemble a sequence of events into their correct order, seemble a sequence of events into their correct order, assemble a sequence of events into their correct order, with 128K of your reward is a shiny new Sinclair QL with 128K of memory, twin microdrives and four pieces of software memory, twin microdrives and four pieces of software computer at the cutting edge of high technology, a computer at the cutting edge of high technology.

Even if you fail to reap that treasure — and only one of either

Even if you fail to reap that treasure — and only die fellow you can — there are 10 Lone Wolf game packs of either flight from the Dark or File on the Water to be won. Each pack contains the game cassette (Spectrum 48K only) and pack contains the game cassette (Spectrum 48K only) and pack book

ne book. Can you afford not to take this trip?

#### How to Enter

here are eight screen shots from the game Lone Wolf: Fleght from the Dank but they are not in any special order. That's your job! So all not to betray too much of the test storykine we have concocted what tale about Lone Wolf to led you place the pictures in

Reed the passage carefully and, when you think you can put the pictures in order, get a sostcard for you can use the sack of a sealed down empty swelopel and put the numbers 18 down one side. Write the key were (for example, "C") of the socure you think is first next to "I" as so on until all pictures have

been placed in the order to fit the story

Cut out the special entry token from this page and stick it to your entry. Don't forget to put your name, age and address on as well. Finally, we want you to write down a battle cry suitable for Lone Wolf, a novice monk trained in the martial arts and magic, on a mission of revenge it can be anything you like but must be no more than 12 words.

Post your completed entry to BIG K LONE WOLF COMPETITION, LAVINGTON HOUSE, LAVINGTON STREET, LONDON SE99 to arrive by Thursday 31st January, 1985

# AND WIN A DIL

The Tesk of Lone Wolf:
You are Lone Wolf. The day starts with your regular morning tutorial in the Monastery grounds. However, this is no normal morning for today is the day of your quest. Leaving the mountains behind, you are attacked but with mountains behind, you are blow of your trusty weapon the foe is siain. Seeking guidance from a mysterious siain. Seeking guidance from a mysterious figure you are directed via a castle to the town figure you are directed via a castle to the town figure you are directed via a castle to the town figure you are directed via a castle to the town figure you are directed via a castle to the town figure you are directed via a castle to the town figure you are directed via a castle to the town figure you are directed via a castle to the town figure you are directed via a castle to the town figure you are directed via a castle to the town figure you are directed via a castle to the town figure you are directed via a castle to the town figure you are directed via a castle to the town figure you are directed via a castle to the town figure you are directed via a castle to the town figure you are directed via a castle to the town figure you are directed via a castle to the town figure you are directed via a castle to the town figure you are attacked but with mountains in the figure you are attacked but with mountains in the figure you are attacked but with mountains in the figure you are attacked but with mountains in the figure you are attacked but with a second figure you are atta

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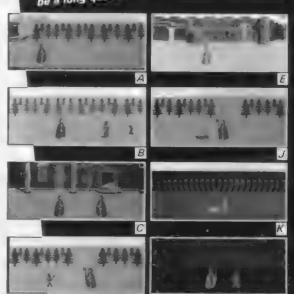
A intries received by the and date will be examined and \*= First Prize awarded to the - der of the correct entry imming the most apt, original test expressed tie breaker A" age being considered. All zes must be accepted as "ered there can be no - - mative awards, cash or \*: Swise If the First Prizewinner sged under 18 years then - entair onsent must be ta it before the prize can be sarded Remaining prizes will be air led for the next best entries Her of ment. No entrant may / mure than one award

's smpetition is open to all sers Great Britain Northern and Eire Channel Isles and Man other than

employees (and their families) of IPC Magazines Ltd., Hutchinson Computer Publishing Company Limited and the printers of BIG K

Any entry received after the closing date will be disqualified as will those received incomplete, muritated, illegible or not complying with the rules and instructions exactly. The judges' decision is final and legally binding and no correspondence will be entered into All winners will be notified and the result published later in BIG K.







95,255 260 IF S=1 THEN GOTO 610 270 LET mox=2.LET mouy=24 280 LET as=CHRs(200)+CHRs(202)+CHRs(201) +CHR\$(203) 290 LET b\$=CHR\$(204)+CHR\$(206)+CHR\$(205) +CHR\$(207) 300 LET c#=CHR#(208)+CHR#(210)+CHR#(209) +CHR#(211) 310 FOR #=37 TO 1 STEP-1 320 LOCATE 1,1 PRINT "TIME."tim 330 IF lev=1 THEN GOSUB 910 340 IF INKEYS="1" AND mox 1 THEN LET mox 350 FOR f=0 TO 2 360 IF INKEY8="P" AND mox<38 THEN LET mo x=mox+1 370 IF moux=7 THEN GOSUB 1000 380 IF INKEY\*="1" RND mox>1 THEN LET mox =mox-1 390 FOR 9= 1 TO 3:IF INKEY#="q" THEN GOS UB 310 NEXT 9 400 IF lev=1 THEN GOSUB 910 410 FOR 9=1 TO 3:IF INKEY●="#" THEN GOSU B 860 NEXT 9 420 IF f=0 THEN LET q\$=18 430 IF f=1 THEN LET q\$=b\$ 440 IF f=2 THEN LET q\$=c\$ 450 LOCATE a,10-PRINT LEFT®(48,2):LOCATE a,11-PRINT RIGHT®(48,2) 460 LOCATE a, 18 PRINT LEFTS(98,2):LOCATE a, 19 PRINT RIGHTE(48, 2) 470 IF level THEN GOSUB 910 488 LOCATE MOX, MOUY PRINT " "; CHR#( 224 ). 490 IF a=29 THEN LOCATE 30,19:PRINT CHR\$ (220):LOCATE 30,18:PRINT CHR\$(220)
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(220)-LOCATE 20,10-PRINT CHR#(220) 510 IF mox=10 AND mouy=24 THEN LOCATE mo x, mous PRINT CHR#(220)
520 IF mox=8 AND mous=24 THEN LOCATE mox +2, mouy PRINT CHR#(220) 530 IF RND>0.7 THEN LET tim=tim-1 IF tim =0 THEN GOTO 940 540 NEXT F 550 NEXT a 560 LOCATE 1,10 PRINT " " 570 LOCATE 1,18 PRINT " " 560 LOCATE 1,11 PRINT " " 590 LOCATE 1,19: PRINT " " 600 COTO 310 10 EVILLE 11 IN 0,10 10 PRINT 90 00 000000 LLU PEINT 99 99 000000 00 00 00 90 90 000000 00 00 00 CON U.C. 100000 00 00 00 00 000000 da, kinda, 0.1.00 00 00 00 00 00 000000 000000 00. M 3 00 000000 000000 000 1/2 630 PRINT 640 PRINT " MOUSE" . S.J PRINT PRINT " BY JASON GI LEERT 550 PRINT "\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* \*\*\*\*\*\*\*\*\* 690 LOCATE 15.12 PRINT "INSTRUCTIONS"
700 PRINT "\*You are a mouse who must rea
ch his \*\*hole on the top floor of an old house. \*\*WATCH OUT FOR THESE CREATURE

#### CONTINUED OVER PAGE







# Warning: these gar



## mes show no mercy.

Acornsoft have now unleashed eight more meriless games onto unsuspecting BBC micro owners.

Ranging from 'Gateway to Karos, where putting footwrong could mean instant death. To the relentless sties of Drogna which could have you dying with aughter.

### Gateway to Karos.

An adventure game in which you'll need all our patience and ingenuity just to stay alive. Your bjective is to find the Talisman of Khoronz but, dichever path you choose, you'll be beset by treachery. Sepents lie in wait and magical phenomenona are in bundance. Should you find the Talisman, you've still find your way back.

### Labyrinth

A superb real-time game with fast 3D graphics. Is you guide Mork through the Labyrinth, he'll have seat fruit to keep going. Crush the Tiger-Moths, shoot the Flitterbugs, dodge the Threshers and find the Magic Crystals which lead to new and more hallenging levels of the Labyrinth.

### Tetrapod.

You're in an arena littered with dormant lizards. iller bees and other hostile creatures with whom will have to do battle to survive. But beware of your an laser bullets, as they bounce off the arena walls.

### Drogna.

Agame for two people — preferably with devious rinds. There are two vaults containing diamonds and surjob is to collect and transfer them to your home see. While your opponent is out collecting you could wak in and steal his loot... but keep an eye out for im doing the same to you.

### Crazy Tracer.

An arcade style game where you're in charge of maint roller. Guide your roller around a maze of orangles while evading monsters who are committed destroying it. Gain extra rollers and bonus points painting different objects. But you'll have to avoid main out of paint.

### Volcano.

Mount Crona has erupted after 150 years of Jance. And your mission as an Emergency Rescue in the place of the save sightseers stranded on the spes. Time is of the essence as the lava approaches esightseers. But you'll have to take time to evade thout the boulders being hurled from the volcano.

### Carousel.

A re-creation of the fairground shooting gallery – with a difference. Shoot down all the ducks, owls and rabbits before you run out of ammunition. Watch out for the low-flying ducks. If you fail to shoot these, they'll steal your bullets and reduce your chances of success.

### Meteor Mission.

On an alien planet are six stranded astronauts. Launch your capsule from the Mothership and by avoiding – or shooting – meteors and alien craft, pick up the astronauts one at a time and return them to the Mothership.

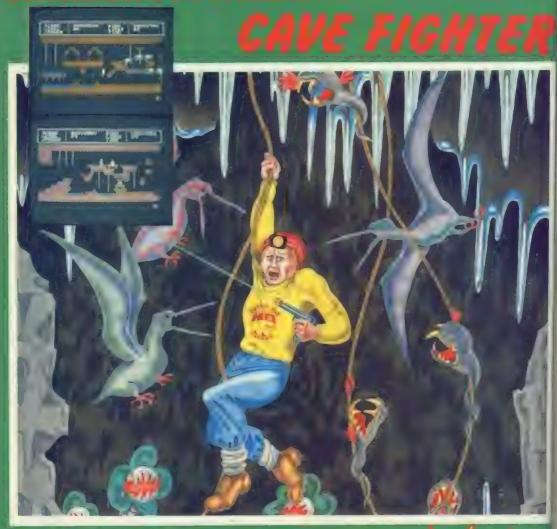
All games – with the exception of Gateway to Karos which is currently only available on cassette – can be bought direct in either cassette or disc form. You will find all these programs at your local Acorn stockist. To find out where they are, or to order by credit card, simply ring 0933-79300 during office hours.

Alternatively, you can order the games by sending off the coupon below to: Acornsoft, c/o Vector Marketing, London Road, Wellingborough, Northants NN8 2RL. Please allow 28 days for delivery.

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# NAMING THE GUILTY

LET'S KICK off this month with a real goodie, Micromania (Sphere, £1.75), for my money the best introductory book available, and certainly the rudest and funniest.

Written by Charles Platt (USA) ind adapted for Britain by David Langford, it sets out to tell 'the whole truth about home computing' and does it with knowledge, wit and style. Aimed mainly at people hovering on the brink of or with one toe in the murky waters of the hobby. It manages to put the boot firmly in on virtually every aspect.

The chapter on manufacturers ("Naming Names"), is alone worth the price if admission and really shows up books like Tim Hartnell's Personal Computer Handbook. Commodore get a particularly brutal savaging, but virtually all manufacturers stagger out of the ring covered in blood.

Even if you've already taken the plunge, there's plenty of good demystifying gen on 'or instance, 'Translating Computer Magazines Into English'

Of course, books like this always suffer from being a bit out of date, even when revised as this one has been. It doesn't tackle the thorny issue of MSX and went to press before Atampened the latest price war, for instance. Even so, warmly recommended if only for the

The Micro Enquirer (Century 18 95) on the other hand has no jukes, is excessively polite about everything and is as boring a book as you could hope to find It's a format series of which ibout 90% is standing copy while the rest is specific to the Spectrum, 64, 8BC or Atan XL Put together from materia. published in Another Computer Magazine there probably is some juice to be squeezed out of Mys trand little fruit, but overall d's to tedious for the general reader and not technical enough for scrious computer freaks

Putting 'The indispensible Found to your omputer' on a book jacket sounds well OTT but I must admit that Chris Williamson's Getting the Most Out of Your BBC Micro

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(Penguin, £5.95) really does live op to 1. Very clear well laid out and to the point it pulls aff that tare trick in computer writing if treading the thin line between 1 are and techno-gibberish and actually being streightforwardly informative.

Apart from picking up where the official 'User Guide' leaves it' it fills in the inevitable gaps Should be in the box with every Beeb

Building Blocks for BBC Games by Bruce Bayley (Melbourne House, £6.95) has the best printed game listing I ve ever seen, beautifully clear with Checksum validations to boot Unfortunately the games themselves look dull as ditchwater. (The giveaway is the step on the cover saving Electron Compatible'l. About a third of the book is actually given over to examining sub routines the 'building blocks' of the title showing the applications of structured programming

Robert Young and Roger Bush, the authors of Games Commodore 64 Computers Play Addison Wesley 16 95 should be published by Melbourne House, if only because they re telliny Aussies. From their biogs they re ibviously both heavy duty wargamers, but it doesn't show much in this selection of 19 istings. About half are arcade games. a quarter abstract strategy numbers and the rest adventures or simulations. A pity that Addison Wesley went for reproducing dot-mains printouts which vary from fairly crisp to virtually invisible because the games sound more interesting than most. I mear-Sunnybrook Farm and Roman Empire? Change the ribbon next time lads

CBM 64 Programs Val 1 Duckworth. E6 951 programs by Richard Franklin, edited by Nick Hampshire, suffers, if not quite so badly, from the same problem. A large chunk of the

book is devoted to high res graphics via machine code, with music, utilities, sprites, usavdefined characters, a long Star Trek game listing, plus a medieval stag night adventure and a clutch of smaller games

As anyone who has tried to use their Commodore 64 at al senously will know the version of BASIC that it is equipped with s not the most advanced version around'. Thus Peter Gerrard introduces, with classic understatement, his Advanced BASIC & Machine Code for the Commodore 64 (Duckworth £6.95) In his usual thorough style. Gerrard, a really serious 64 man, sets out to go beyond those slow motion PEEKs and POKEs, using an arcade game to introduce the rudiments of machine code programming Unlike its stable mate above, it boasts crystal clear listings, an excellent appendix of useful information summaries and a proper index

JOHN CONDUEST selects text

Rust in P Controls: Move sandpaper in eight directions using joystick. Only one owner says Sid the Spiv, propi the Whizzo Wheels (Used) Emporium Ltd. mug, I fall for it. 'Course he didn't tell me at dreaded contagious rust bug, and now it time job making with the old sandparkeeping the nosey dorks next door from sestate of the old banger...

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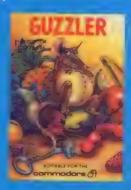
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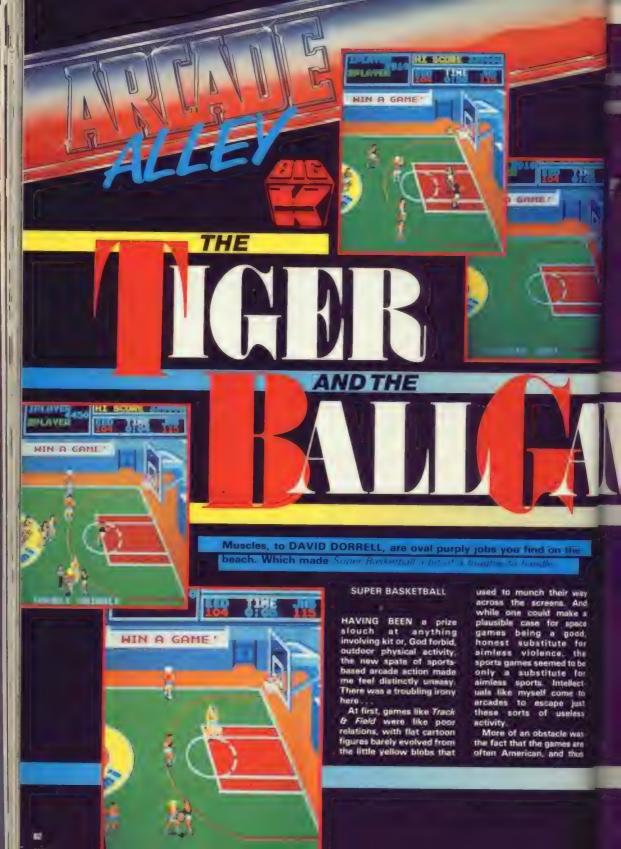
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quite ellen, which brought them, I suppose, back into the realm of the true arcade game. Ten Yard Fight (and who ever heard of a sport celled Tan Yard Fight) was the best of these, since its rules might, as well have been those of a space battle, and the bizarre formation tackless a challenge to any

MID

Defender's with

.

Here one was back in the abstract where all that mattered was the split second of galvantaling interplay between human serve and electronic pulse. You can dress that up how you will and call it a substitute for whatever you like, the arcade termite will devour it all. And so, in time, I too became a digital decathiate. What does a digital decathiate do between Olympics?

He or she could try Kenami's Super Basketball, athough he might feel a little out of place since the players in this simple but neatly transposed sports game are all female. Perhaps designed to counter such popular mucho numbers as Nintendo s Punch Out, which this summer savequeues of bruising male players eager for a jayatick bout, Super Basketball is a less aggressive, more nimble game.

With three possible actions dribble, pass or shot the action is easier to get to grins with than Punch Out but faster and more complicated in its possible plays, facilitated by a more realistic screen

parspective

Unlike Track & Field or Ten Yard Fight, the speed of play berely lets up, and the game riliquires constant responses tackies must be dedged by single dribbles, passes made to team player in the right positions, and shots taken as near the basket as possible all in all, i recken it could make a sportswoman of me yet.

### TWO TIGERS

PRIMITIVE in its concentration between the loss has the virtue of being eupremely and deafeningly dumb. Its sole innovation is the dual control system, allowing two chumps to do battle with the even more limited intelligence at work behind the excean instead of the usual one.

Selecting the 'doglight' mode will enable you to engage your arch rival in the air even as you stand at his side. Already, the options begin to close in.

Your lighter, so cheeffully scrambled at the drop of a coin must defend a battinahin of some nameless class that steems into view with all the drama of a plastic duck at a shooting gallery. Nor is your arcraft itself the Cinerama model to which so much was owed by so many.

This particular conflict plays itself out against stained with skies screaming Stukes, yes, but sedly one's own machine is hard to spot among all the others buzzing like hornets around the screen Luckily. the representation of this war theatrn bears no relation to real life nor even the layer of gravity of serodynamics. None of this matters much though, as the only reason for playing

this game is the soundtrack

A composite reel of old war movin sound effects complets with cries of bembs away and even inexplicably — a cavalry fanfare this serves to canjure all the atmosphere the graphics lack. Its not unlike a 20p ride on a serve of eural dodgens. You'll probably linel your erch rival has yone down laughing.

Pics: DAVID CORRIER



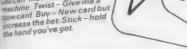
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iancy yourself as a card-sharp? Try beat the house odds, and you'll see why it's the casino owners, not ou, who're driving around in Cadillacs So why not try out this theap home version, and save yourself the heart-ache? Try to make twentyone points, or as close to it as you can Instructions to the machine Twist - Give me a
weard Buy - New card but increase the bet. Stick - hold





\*: 1: \*: "B"THEN350

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430FURA=1T02500; NEXT: 1FB<22THEN450 SEPRINT"

440PRINTTAB117,261: "BANK IS BUST"; TAB1
440PRINTTAB117,261: "BANK IS BUST"; TAB1
17,28): "PAY ALL HANDS": B=0: GOTOS:10
450G=G+1:J=J+2: IFJ=12THENB=21+B/50:GOT 4601FH(>5AND(B+1 170RB+L)21)ANDB(=H+15

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1; "BANK TAKES ALL" : GOTOSI:
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SSOT(I) F(I)+A:IFA=ITHENL=10 MARIO

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5800NC DIVI3GDSUB610,620,630,640:C=C M FC=OCOLOUR1: GOTO590

1 EDLOUR1: VDU23, 255, 8, 28, 62, 127, 62, 28 LOUR 130: ENDPROE

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\* AUCDI (10ko: VDIL)\*\*, 255, 8, 28, 625, 127, 127, 1 .28,8,0:R: TUPN .....O: RETURN





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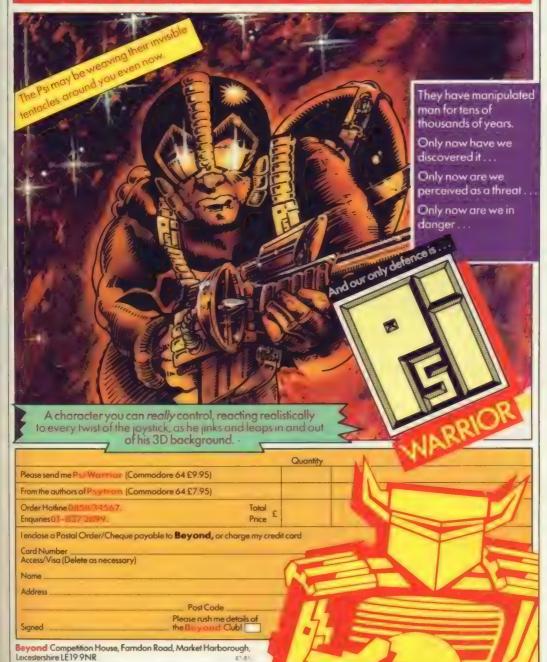
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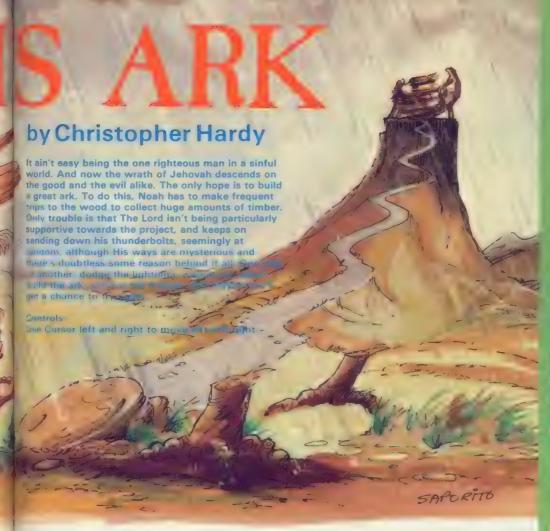
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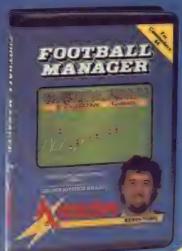
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game from Kevin Toms, who designed the Software Classic – FOOTBALL MANAGER OFTWARE STAR allow to the software company to the software to company the staff orthlers. have to cope with staff problems.

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# FORSYTH SAGA

The Fourth Protocol is best-selling thriller-writer FREDDY FORSYTH's newest inter-smash hit. Now his devious and tense world of spies, counter-spies and briefcase-sized portable nuclear weapons has gone all pixelloid. NICKY XKLUNA reports...

THE AMERICAN market has convinced us that interactive fiction is where it's at' explained Jim Cochrane — unlikely syntax indeed from Frederick Forsyth's very English and distinguished-looking editor.

The essential element of any computer game is an idea. Hutchinsons (the publisher) had used lateral thinking - and got one They decided to create software from their existing titles. Of their many fiction authors, F.F. was the most obvious choice,' explained Jim. Not only that, but the reclusive svengali of suspense was willing to tolerate the idea He saw it as a new medium for his work. So we went ahead.' Does this mean that F.F.' is computerphile? 'No.' Says Jim. 'But his children are, so he may well soon be."

'We wanted a game whose calibre would match that of the book,' added Hutchinsons MD Doug Fox It must appeal to all ages, and require logical thinking rather than jargon. We didn't want it to come with a wad of little than the wanted was a support of the wanted wanted was a support of the was a support of the wanted was a support of the

Hutchinsons have big plans for *The Fourth Protocol*. It will be out on disc for the Commodore and Macintosh with the American market in mind. For those elien to British idiosyncrasy, there'll be a glossary so that they can look up oddities like 'The SAS' as they come to them.

Doug Fox has no doubts about the popularity of a game based on a Forsyth novel. 'Our first priority was to find one person who could oversee the design.' In fact he found two.

John Lambshead and Gordon Patterson are daytime marine biologists They met eight years and when taken into the same batch of recruied John was enter of the Gamer, and Gordon a collector of ministure sodiers. After discovering their mutual

interest, they designed several board and role playing games together. Their first electronic product was Legend from Century. The Fourth Protocol was started in September, the first draft just having been given FF's approval

But how did they even begin to translate FF's great 50 page tome into a game? 'We didn't want simply to translate the book into a game. If we'd stuck entirely to FF's story, there'd have been no surprises. We've created the same basic plot and atmosphere, but situations will be different.'

How was it structured?

Basically, long periods of intellectual activity interspersed with short periods of violencel We've divided the game into three parts — and three loads

parts — and three loads Roughly 'Hunt the Traitor,' 'Find the Bomb', and 'Arcade Action'. The first section sees John Preston, of the Civil Service, trying to find a top level leak.'

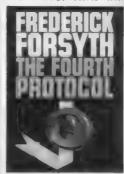
The John Preston in the novel is a bit of an anti-hero Dowdy and depressed, he's a meritocrat rather than a member of the Magic Circle Did they intend to convey this in the game?

'Oh yes. We've tried to emulate the claustrophobic world of M15 as much as possible. Your quest will be impeded by your superiors and there's a 'prestige meter'

to assess how much weight you're pulling. John will have certain unavoidable tasks which will accumulate on a stacking system — so...no shirking! You'll have sixty days to find the leak (each day equals two minutes in real time). Again, the book won't help you, as we've decided on a random mole.

'You'll be able to use the computer — er...as a computer. That is, M15's Central Intelligence computer. You can also store files and make telephone calls.'

The next load, or 'Find the Bomb' is a special game. You move from screen to screen looking for bomb components and picking up clues. The parallel book section [again, reading it won't help] starts with



Preston being given a horizontal 'promotion' to a less effectual position in Ports and Aeroports Meanwhile, Petrofsky, number one Russian 'illegal', is assembling an A-Bomb, the composite parts of which are being smuggled in by assorted courriers. You have

the use of Intelligence services including the Watchers (surveillance artists). Petrofsky (known to the service as 'Chummy') is able to communicate clandestinely with Mother Russia using a series of 'one time pads'

Our team have used FF's detail to their advantage Every soft copy of The Fourth Protocol will have a code breaker matrix. This will be engineered so that it is virtually impossible to photocopy. 'We'll be making life harder for pirates', explains, John

By the time you've made it to the final section, you'll have located Chummy with the bomb. Section two will have given you the codes you need to diffuse it. But. The bomb is guarded by kamikaze Russians, and you're working against the clock. Using the SAS Regiment, you member storm the bastion. Then you're in for some full blooded arcade action. It seems that every genre has been plundered in order to make The Interactive Fourth Protocol'

'Actually, our biggest problem has been trying to avoid having a D notice slapped on the game as soon as it comes out! Both of us have ended thinking like Intelligence operatives and have come across certain information that we just can't use – like the real location of Intelligence Headquarters There are some real characters entwined in the fiction — so we have to be careful.

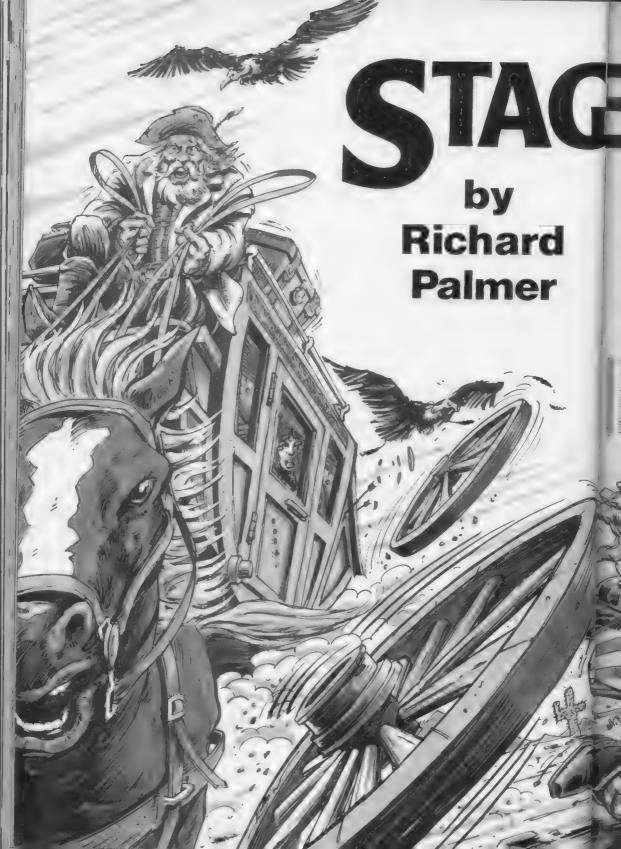
'After all, we are Civil Servants', says John, 'And we don't want to end up on the Falklands'!











Pesky buzzards! As if it ain't bad enough coping with a wrecked stagecoach, this here winged varmint's hangin' around lookin' to dine on cowboy meat. If they'd only build those coaches like they used to, but no sirree, the Deadwood Stage is a rolling around every which way. So catch them wheels, says the trail boss, but don't let them run you over, and above all watch that buzzard.

### Controls:

Use joystick to move right and left. Fire button to jump when moving.

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TAGECOACH for CBM 64

## STAGECOACH Continued from page 93



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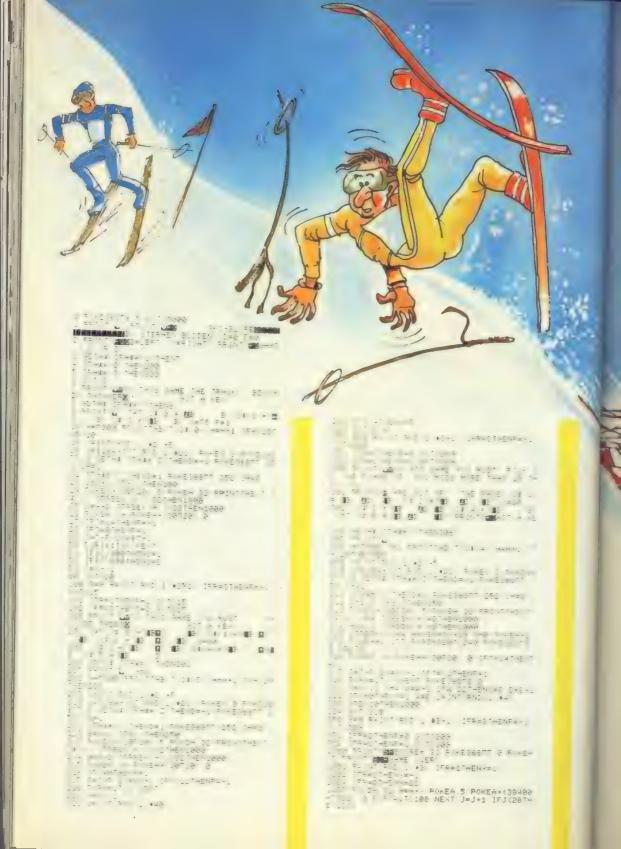
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## KIM ALDIS ponders the arcane secrets of the Third Dimension

A SHORT WHILE and According Victorial Author Swell more Tenantity they impried a composition on management the form of Effective the state of which has rever been seen before. Both these games has been before. Both these games has been before which has been around making produces a representation of the produces a supplied which has been around making produces a computers since the world Go, In fact, in the beginning there was only vector graphics.

here in BAIC tris of all to make life simple we'll consider two dimensions, X

Look at (ight) and imagine the

angle nets to point FI.

(11 Xt = R\* COS alpha – theta) SIN (alpha) = Y/R (2) Yt= R\* SIN (alpha – theta) COS (alpha) = X/Y From (1) –

Xt = R\* (COS(aspha)\* COS(theta) + SIN (alpha)\* SIN (theta)

Yt R° (SIN(alpha)° COS (theta)

COS (alpha)\* SIN (thetal)

Stringing all in a bucket and smaking hadour a on gives X(= X°COS(theta) + Y°SIN

\*T X\*SIN(ineta) + Y\*COS

of the control of the control of the control of control of control of the control of control of the control of control of

The thoree equations are all only well in amore structures in a fine of the control of the contr

you can muck about it space with any number of dimensions. It you may not not fourth dimension was continued to self-incovers then think again, you can have will think a muck it you bank you are not rand hold onto your markly a self-of trand hold onto your markly.

Expressed in matrix form the above equations look like this

(Xt, Yt) = (X, Y)\* [COS (theta) | - SIN (theta)]

When books fairly montmation but comparison with the countries to XI and above it a fairly easy to see the general case.

(X, Y) 1 M1 M3 M2 M3

C\*M3+ Y\*M4)

Having sorted that for out someone out mere a probably thinking Goshi then look like arrows a write to the fore the arrows of writes to the place of the reasons winy they're very nice single for someone of the reasons with they're very nice single for someone or wrap their teeth round. The other been a the flag on the world someone on the manufacture of the one gent transformation. In this year account operations can be performed an operations can be performed an operations.

Using the matrix notation we can start to think about other transformations. Namely scaling, collection and shearing. Diag(2) gives a hist of the matrices for these operations.

**OVER PAGE** 

### FROM PREVIOUS PAGE HOW TO SELECT AND

Rotation (glockwise) Rotation

Anti-clockwise

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Scaling

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(3) Reflection (x axis)

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Reflection (y axis)

10.11

Yishear

Frial [1.5y]

Now all we need is a routing to perform all these one. They're all different but because the matrix same, we can use a single array. el mio il just before ne operation is performed and use a single procedure for the metrix program cach procedure

mple and easy to keep tabs on. Tries is all very well but you ve

as well, and the net result is a shift that been in the oxigin and all the stree points on the drawing of the same amount do your rotation and then shift is

Taxe 8 Shift outline. The reason can too it a system which can though, a a homogeneous co point it y accomes 10 ty (7) For most autooses we can say r = I and avoid a lot of awkward division. The translate, or shift

> 10.1.0 Tx Ty 11

and all the previous ones can be exectly the same is in light. and solumn all zero except the Edium (196) vaich is one So example otation clockwise

COS(theta), — SIN(theta),0| |SIN(theta), COS(theta),0|

Now go shead and try it out Programme three accepts a series of values from the key world and performs a mans. input statements like COS(45) of whatever and see what happene Stan an doing shift one and the you do one rotation of 40 degrees the next op you do will skorming at ounemake a word's exactly be like greesed speed of BASIC. Anything faste needs machine code and ( S. II. Whole new ba





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We're overwhelmed. Though we should just add that with Atarisoft, you can now play Pole Position\* on the Commodore 64, BBC and Spectrum computers, as well as on all Atarisystems. And you'll also find available other games such as Galaxian, Robotron! Moon Patrol\* and Ms Pacman.

## INTHENAME

OK Kid, up against the wall and spread 'em while we read you your rights. Don't know your rights? Tch. tch, kid, you've got trouble comin'...

By JOHNA



## EOF THE



### COMPUTER CONSUMPTION

WHEN YOU buy something from a retailer, in a shop or by mail order — be it a computer, peripherals or software (or, come to that, anything from onions to oceangoing yachta) — whether you realise it or not you're entering into a legal contract with the seller, with the law very much on your

For your part, you agree to pay the asking price, while the seller agrees, under the Sale of Goods Act 1979, that the goods are fit for their usual use, are of propert quality and are as described. Moreover, under the Misrepresentation Act 1967, anything he tells you about them has to to be true.

OK, so you walk into a shop and see this snazzy-looking computer with a sign saying "The new space-age Rubishi XYZ with stereo sound!" You ask the assistant if there are games available for it and, when he says there are, put your hard-earned readies on the counter and walk out with your cardboard box of electronic wizardry.

### **ERRATIC**

You get home, plug it in and nothing happens. Or happens erratically, or back to front or in Japanese or whatever. Right, the shop has broken its first promise. A computer is supposed to compute and when you buy something for a function, whether to eat it, sit on it, drive it or play River Raid on it, there's "an implied condition that the goods are reasonably fit for that purpose". Reasonably means that you can't expect as much computing from a VIC20 as an IBM, but if you told the shop what you wanted from a machine and the one they sell you doesn't. do what you want, then again it's not "reasonably fit"

If it works alright but is scratched, buckled or otherwise shoddy when you open the box, or the lettering starts coming off the keys in the first week or anything else that doesn't impair the functioning but is annoying, then the second promise has been broken, the "implied condition that the goods supplied are of merchantable quality". However, this doesn't apply "as regards defects specifically brought to the buver's attention" or "if the buver.

examines the goods ... as regards defects which that examination ought to reveal".

Sometimes these promises will overlap. Say the inside of a machine is full of mouse droppings. Even if you had a butchers first, you wouldn't be able to tell, but it certainly wouldn't be of "merchantable quality". On the other hand it probably wouldn't work too well either.

If a shop assistant describes something, or it carries a sign or label, there is "an implied condition that the goods will correspond to that description". In other words goods must be what they say they are.

Apart from accurate descriptions, sales talk must be truthful. If your decision to buy something is influenced by information given you be the shop that turns out to be incorrect then it's been misrepresented. This applies if the shop acted innocently and to the best of their knowledge. However, this doesn't cover opinions, only statements of purported fact.

So there you are with your Rubshi which doesn't work, is falling apert, has mono sound and for which there are zero games available. What do you do about it? Easy — you take it straight back and complein.

Your first advantage is that the legal definition of acceptance is not that you've paid and taken the goods out of the shop. No siree, bob. Acceptance in law is either making it clear that you accept the goods as satisfactory, whatever that means, or have kept them for a reasonable time, wherever that means in spades, Either way, the faster you met to work, the better

If you have not "accepted" the goods, re you're back screaming within hours or days, then the shop must refund your money in full if faults develop later, within weeks or months, then you'll probably have to accept damages in real life most shops will either exchange faulty or unsatisfactory goods or give you credit but neither of these remedies, even though they may be perfectly satisfactory to both paries, is recognised in law. The law says refund or damages nothing else.

'Damages' are normally taken to mean the cost of repair, but the shop is in fact liable for any related

### CONTINUED FROM P.105

loss of expense. Say some software gets wiped out when a machine crashes, or your telly gets blown up for anything else directly related to a defect in the machinel, then the shop, being in breach of contract, must make good Moreover — something that few people realise — you are entitled to claim for inconvenience. So the shop is liable for your time, transport and trouble. One example: Atan's guarantee claims that you have to pay the cost of transportation, but this has no foundation in law.

If the shop tries to brush off your (verbal) complaint, your next step is to put it in writing, addressed to the highest managerial level. If you still don't get any joy, find out what trade association the shop belongs to end go to them.

Lastly, there's the Small Claims court. (You'll find an excellent rundown on how they work in The Penguin Guide to the Law.) The important things to remember are that even if you lose, you don't have to pay costs, and the whole thing has been made as accessible and do-it-yourself as possible, so it needn't cost you a penny and is by no means the daunting exercise it might sound.

### MOTABLEMENT

There are, however, some simple pre-emptive precautions. First, do your research so you know exactly what you want and why. Take a friend with you - an adult witness is invaluable if there are any arguments later. Make the shop set up the machine you're actually going to buy, not just the demonstration model, and check that everything's kosher Responsible shops will do this anyway, more for their own benefit than yours. (As Lion House, who test everything before it leaves the shop, will tell you. they don't need the aggravation either.)

If you still run into problems. remember that everything we've told you is the straight goods, so don't let the shop tell you different. If they try and refer you to the manufacturer, it's not on. Your contract is with them, and they have to honour it. One important point though: the contract is only with the original purchaser, so if you're given a machine (or buy one second-hand) you either have to get your benefactor to deal with the shop or, under negligence laws, go direct to the manufacturer. Another example: Sinclair spell this out in their guarantee which is "not transferable\*

However, under the Supply of Goods (Implied Terms) Act 1973 there is a general contract with the manufacturer. The golden rule here is, never fill in a guarantee card. Keep the shop teceipt instead. Despite Acorn, fi'this guarantee shall only be effective if

mailed within 10 days of delivery" lor Commodore ("should be forwarded within 28 days"), there is absolutely no requirement to do ao. Though most say sornething like "this guarantee does not effect the purchaser's statutory rights", and it is in fact a criminal offence under the Unfair Contracts Act 1977 to try and limit such rights, by signing if you indicate that you accept the manufacturer's conditions, conceding a lot of legal ground. While you lose nothing at all by not signing.

Most guarantees undertake to replace or repair defective equipment within 12 months of purchase (though Acorn only give you six months). This sounds very nice of them, but alas, it's not up to the manufacturer to decide when his legal liability ends. The question a court would ask is, how long should a computer be reasonably expected to last? Interestingly, Commodore's 12-month guarantee also says that the 64 should give "many enjoyable years of trouble-free use". To me "many" is at least three and probably more, and a court would almost certainly take the same view. Obviously the more you pay the more you can expect and a BBC, for instance, can reasonably be expected to last longer than an Electron, but both should hold up for longer than six months

Guarantees may, as with Acorn and Commodore's, state or imply that liability is limited to the actual hardware, but this ain't so. The maker is liable for related damages just as a shop is. Where both shops and manufacturers are on safe ground is when they disown machines that have been dropped. modified, defaced or otherwise abused. Lion House's best story is of someone who mounted a Spectrum on a wooden base, drilling in wood screws from underneath, and then complained that the machine didn't work!

When a machine goes in for ropair, whether by a repair shop, the original dealer or the manufacturer, there's another contract, again with four promises. Three are fairly straightforward; the work will be carried out to a reasonable standard; the materials used will be of good quality and reasonably fit for use, and the work will be done as agreed.

The fourth is a bit trickler — that the repairer will take "reasonable care" of your goods. Attempts to exclude liability, like signs saying "goods left at customer's risk", are an offence under the Unfair Contracts Act. The only guarantee Live seen that does attempt to limit.

tablity is Acorn's, which states that "the Company does not accept responsibility for any loss or damage during transit to or from the dealer or the Company". GPO nasties aside, the fact of the matter is that if you hand over a dud machine. You can legality expect to have a fulfy functioning one returned to you. Once it's out of your hands (and in the repairer's), it's the repairer's responsibility, except in the event of his being able to prove that he was not negligent.

What it all comes down to is that you have a lot of rights that nobody, but nobody, is going to tell you about. With some shops you'll have no trouble at all — with others, nothing but. And the same with manufacturers. What the hard-case mob hope is that you'll give up and let them get away with shafting. Hope we've given you enough to know how to fight back.

### COPYRIGHT

UNLESS THIS is the very first computer mag you've ever read, you'll know that software publishers do a let of worrying about "unauthorised reproduction" (In plain language, piracy) now estimated to cost the industry £10-£15 million a year.

They invest plenty of time and money in developing programs and their efforts are, in theory, protected by the Copyright Act 1956 and the Universal Copyright Convention, which most countries have signed.

Copyright covers any original work. "Itterary" or "artistic" for both) into which the author (or authors) have put sufficient labour, skill or judgement clearly to differentiate it from any existing work.



The Act forbids the reproduction, publication or adaptation of such work by any unauthorised person. Even though software is not specifically mentioned in the statutes, there is absolutely no doubt that the implied protection does exist, for it has been extensively tested in the courts. The only area of doubt is whether ROMs and EPROMs are covered by copyright or patent law.

12

2

31

16

12

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No registration is necessary: all you have to do is dream up something new, commit it to paper, tape or disc, put \$\infty\$ Joe! Jill Bloggs 1984 on it and hey presto! You too can start worrying about pirates. Unless you work for a software pub-

lisher, that is. Work carried out !! in the course of employment under a contract of service, written or implied, normally belongs to the employer. However ownership of copyright will depend on the conditions of employment as there are plenty of gradations between full-time salaried employees and commissioned freelancers. Freelancers usually retain copyright, but even that depends on the nature and wording of the commission. Programmers now have their own professional body, the Society of Software Authors (7 Meadway Court, Whalebone Lane South, Dagenhem, Essex) which hopes to thrash out the problems involved in contracts and copyright.

The classic adventure game Adventure, aka Adventures aka Colossal Cave, has never been copyrighted and thus is in what is called the Public Domain. This means that anybody can copy, publish or adapt it, but nobody can gain any legal rights over their version which can in turn be copied, published or adapted. However the 70-location endgame which Level 9 added to their implementation, Colossal Adventure, is clearly a work of labour, skill and judgement and thus copyright. So theoretically you're free to copy the first two thirds of it which only contain minor alterations, but not the last

### DUOTLEGGING

There are three distinct forms of piracy - Individual, plagiarism and bootlagging. If you or I, God forbid, should make a copy of a program we'd be in breach of copyright just as we would be in taping a film off the telly or music from a record. But on this level it's really an ethical or moral question - how we personally feel about ripping people off - because, let's face it, there isn't much anybody can do about it. But the "software is overpriced" argument won't wash (though admittedly Atari's prices used to be a virtual incitement to piracy). The truth is that an awful lot of games and utilities are literally worthless (most 64 ones for a start) while some, particularly Spectrum's, are very reasonable for what you get, ideally duff software shouldn't be published, but you avoid paying over the odds by using judgement.

Software houses see every illegal copy as a lost sale, which probably overstates the case somewhat, as it seems pretty obvious that a lot of schoolkids go in for obsessive collecting of games they'd never dream of buying, no matter what. But they also make wild copyright

claims. Take a typical, and real, example: "Unauthorised copying, hiring, lending or sale and repurchase prohibited". A lot of this is just hot air, because once you've paid your money, software is your property and if you want to hire, lend or sell it, that's your privilege and the manufacturers can take a walk.

### COPYING

Plagiarism is the one that really causes the bad blood in This is when one the biz software house adapts another's product and markets it under a different (though usually not very different) title. Law development costs equal big profits. This sharp practice is pretty widespread as you can tell from the number of clone cames around, endless variations on Pac-Man. Donkey Kong, Miner 2049er or whatever. There have been several successful civil prosecu tions for infringement of copy right, but the problem is demonstrating that one program is substantially identical to another. That "substantially" is an iffy word which brings it down to shading Enough minor sub routines and an idea pincher has a good chance of beating the rap.

The real crime is large-scale black market publications of other people's products, usually games, and it's in this area that software publishers want to see changes in the law While Part 1 of the Copyright Act, the civil bit, works OK, part 2, the criminal sanctions, doesn't. The criminal prosecution. brought by Crystal Software (now Design, Design) against Yorkshire Software, ended with the defendants being fined £40 with £50 costs As Crystal estimated that Yorkshire cost them £40,000, this result was in their view a bit inadequate Moreover, Crystal weren't even able to establish that software piracy was a criminal offence, because, boxing clever, they stuck to claiming infringement of their trade mark, X-Tal Basic. If Yorkshire had renamed it, even that wouldn't have worked

### EVIDENCE

Microdesi, losers to Activision in a civil suit (Pitfall vs. Cuthbert in the Jungle), have succeeded in obtaining what's called all Anton Pillar order against a bootlegging operation in Lancashire. The idea of the order is that evidence of the alleged crima can be seized by the police before the accused get wind of the impending collar feeling and destroy it. Tapes, what tapes? But they

still have to deal with the short-comings of the Act.

FAST, the Federation Against Software Theft, has drafted a Bill that amends the Copyright Act so that it specifically covers software and provides the police with greater search much harsher penalties (up to f10,000 fines and/or two years' imprisonment). A similar amendment was made in 1983 to cover video tapes. Nicholas Bethell MP introduced it under the 10 Minute Rule in July. The government has more or less promised to support such a Bill. But it will be a long time before it becomes law, no matter what

FAST's biggest problem is that a lot of pirste versions are so good that they can't be told from the originals. So, in order for the police to be able to work the proposed changes in the law, software houses will have to come up with some way of branding their originals in ways that the priotes can't copy. Otherwise proving theft will be virtually impossible

### **BOOTLEG SOFTWARE**

Even a new lew won't help with the most glaring example of software piracy, the Portugese company that is openly selling, and even advertising, booting software There doesn't seem to be anything the (mainly British) victims can do about it The law is on their side OK but international litigation would be slow expensive and uncertain All Vasco has to do is spin things out as long as possible, then do a runner with his ill gotten escudos His brother sets up under a different name and everybody's back where they started

The answer to piracy seems to lie not so much in the application of the law, even amended (though that might help against the pros) as in the development of built in security locks or add-on devices (dongles) that will stake it impossible to copy programs. However, given the dynamic state 67 computer science. that's easier said than done. An American company recently produced a program called Locksmith which would copy any supposedly protected soft were. The only thing it couldn't copy was Locksmith itself. You guessed it - another company promptly came up with a prog that could! In theory an unbreakable security device already exists, Jim Lamont's famous program which the government claim is a threat to national security and have locked up

## ETTERBASELE

### Letters to BIG

# WANNA WIN A FIVER?

Yes, you too can join the formidable team of literati assembled on this here double-page spread and end up RICHER by FIVE WHOLE POUNDS! (If we publish your letter, that is.)

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### DOPPELGANGER

I fraze written this review of Motor Mania in order to become a regular reviewer for matine 64 trame

LEE STUBBS Castle Vals Birmingham

I have written this review of oil Monotor Manie in seek to frontness become a regular reviewer for I recenting

Commodure 64 games LEON DODD Castle Vala Birminghem

· An incredible demo of para psychological cowers both applicants live in the same street, no less, and both have provided identical reviews of M. Mars. Truly ins frombers of science keep

### **BIG KRYPTIC**

Something has been worrying us here down under. What is the illiniar definition of Houser and the numerous other impessor senses in BIC. 8. We so have our theories as to the meaning out are not assolutely sure. Could you publish a

goods to throse computer ragge?
Despise as cryptic language, 81G K is the best mag of its librar — and we get 95% of what's available down here. Keep. up the bonza work!

NICHOLAS MURRAY

East Dencaster Austrana

 A Hacker is one who hacks. Hacking is performed on a competer viá the telephone system and a device called a modern. This exactles a transfer to boat up (plug his equipment in). Tog on (open a channel) and falk (talk) with other hackers. British Hackers, please submit your siscitants arget for Dizy oscillation

Meanwhile Nick I just begon to have a real live sautive backer here for your perusal (PS What's Immiga 31

### HACKER HAS HUMP

How lunnaguy I am that you do not take a more liberal view of macking and trackers nor write about them more! I am writing to protect hackers from future standaring. You MUST write more about The Att of Hacking land

HONEY MONSTER. Margare

### HACK THWACKER

The B,C,B,B Treas the idea of bashing woman and dinosaurs over the head Imacine have alought ou of the best games on ine Spectrum Let me tell Nicky Kikluna htrat his reviews are as informative as a melted loo seat that a cat's

EDWARD JOHN! Wylam Warth'd

### **IDEOLOGUE**

You don't like 8 6 Bill lust because you think it's sexist J. GLEAT Birmingham.

o You've both got hold of the wrong end of the ahem - club I'm atraid It's 8.C. Bill's graphics and

action that never fail to underwhelm me The offence is not ideological

### BLUNT

Tyne & Wear.

Could you please tell me wher the Vic and 64's hi-res bit mas starts M. COX Hebbum

· Ah Commodere Businesa Machinesi Always it was ze writing Obscure solution to a commonplace problem. And why bother making different machines mutually compatible? Such a sense of humour! Yes the Victory the 64 are totally different. The VIC 20 doesn't have beinapped graphics as such instead you have to simulate high revolution music using redefinable characters. You fill the with 512 aereen redefinable characters and then adjust these to give the illusion of motion. this is not a fast procedure in BASIC and frankly | wouldn't bother unless you're doing it in assembler

Din the 64 high resolution programming is also slow but at least there a a true bit mapped screen. This would normally reside at address 8192, but thus to the VIC chip's memory saging system, you can relocate it almost anywhers. A complex affair in either case, and I'd recommend you to get hold of a more teclinical manual, such as Commodore's eyen Fragramme s Reference Mercus II you really want to dive in deep - F.F.

### **OUTRAGE**

You've saily done it this time. If your cours had any games sense, Valhalla would never have been included in Larrie Games it a the game of the year!

DAVID SMART Dingwall Rosshire

## ETERBASELE

## Kidited by NICKY XIKLUNA

#### **GHOULBUSTER**

Here's what to do for infinite lives in Ghouls on the BBC. Press control and Break to

reset the Beeb. Type PAGE 62200

demma

LOAD GHOULS2" (return)

twall in the progrup to 2525FG. This part is called GHUUI \$2 When it has loaded sopy out the line until Li and change it to LI = 9999999.

Coury the test of the line and press RETURN Now type LIST 60. Change the line

60 FOR F 0 TO 32 STEP 6 FOR on Copy the sess of the line and return Type 115 1 2055

Conv the fine out as far as 2055 NEXT and them return Type RUN frequent

Charlin 222 which loads up to 18 18FF. That's all there is to

GARETH WOODHAM. Weymouth Desset

#### SPECTRUM MINUS

The Spectrum - is too late Ai f 180 is is not good value The only difference from the old Spectrum is the Ot style keyla and You can get a better keyboard for £50.) Sinclair has wired in some new keys - but these can tead to crashing problems



anyway. If the keyboard is as lowsy as the QL's, lespecially that space bar uses will certainly be no better MI

The launch is a result of Simplair's pamic ave mayy machines into the Amstrad

NEIL OLNER

Doncaster S Yorks

#### LETTERHORN

Your letters page is too shore but thank God - no Jet Set Willy Pokes, and only one Piracy letter I'm grad to see that you've changed the presentation of your review pages for the better - build was dismayed to see that you had four reviews for the minor Dragon computer, and only six for the CBM 641

Your pacture of T Tyler was very remeating I agree with Tim O'Grady's letter saying that different computer uyanans should bury is in a BHC keybuard). PS Why snowld Ken

Ward have a beard?

MARK MESHEEHY. Eastkilbride Glasnow

. The beard? Just a hunch IVes out posture of T.T. ive very revealing. It was a picture of Nicky X

#### DRAG OFF

I ke you software reviews except for one thing There are rarely any for the Dragon Even when then compared to twenty or so for the Spectrum. Rease an w have more Dragon software

KEVIN REID East Lothian. Scottand.



#### TRUE CONFESSIONS

United frames. It must ling sick of all the rivality between software hous. First the best of like to know what your favourite games it

ALEX RUBANSKI. Kent.

· Funny you should ask that, one we we just no this great idea for feature entitled Cames Reviewars Play

#### SUPERIOR POKE

Investity to Mr. A. Rohman s various pokes to total oruginaris on Atan machine. (Issue 7), why not try of small program to disable the Atari's system reset?

3 188 POKE 9,2 TRAP 10,00 10 GRAPHICS 18 POST ION 15 / 6, press syste.

reset 10000 RUN

Pu lime 5 at the hart of Your program and time 10000

A E JONES. Lichfield. Staffordshire

#### EAT IT

I became very mate a Javi Pari s lienter (Issue 3), de had the cheek to clain that 'no overtee means in shance of aeming a good some,' I do own a juyana unike David Parrayho obxiou ay has men to spend on his pieces of junk, which Sethainly no asse, whe playing Sabre Wuff.

I milected all me preces and completed 91% of game without a jourtic David Par was wrong - and FURIT STINUTE THE BE ROBERT MIDDLEBROOK,

Wakefield, West Yorkshire

#### GENDER BENDER:

Ame your a boy or a girl? N. BAFFIN. London NW3.

### **ELECTRO-MAGNETIC NIGHTMARES** (ETHEREAL CEREAL)

The trend for controlling mechanical and electrical devices With micro processes a may well and in team. The problem is sectro magnesic possition. All sectronic equipment can be upset by meetra magnesic interference. For example state and Theatre's removements highling system was recently ometery immobilised by the Been's local low power test

transmissions. Fine trakt are in the process of lightening the FMC standards. But no amount of shielding can protect from committein like a nuclear expression while will cause ransistors and chios to disappear in a pull of smoke inerally

The only way to protect your equipment is to enclose it in a meral (Faraday) cage

C. HALES Long Eaton

Thanks for the info. C. Now could you tell us how we so about protecting ourselves from those really dangerous radio Waves - those that waft POWELL?

HOW TO SAVE

££'s

ON THE COST OF

SOFTWARE

AND HARDWARE

ADD-ONS'



**Christmas Competition** 

1st prize: ZX Microdrive & ZX Interface 1 (worth over £70)

2nd prize: Currah µSpeech Synthesizer (worth £29.90)

10 runner up prizes of free games software (each worth

OVET £10) To Celebrate the Christmas season Logic 3 are running a grand Christmas Competition with a ZX Microdrive and Currah µSpeech Synthesizer as first and second

The ZX Microdrive, complete with Interface 1, is undoubtably the ultimate Spectrum add-on allowing programs and data to be quickly saved and recalled. The quickly saved and recalled. The Currch µSpeech is both powerful, featuring an infinite vocabulary.

and easy to use. To enter the competition carefully read the reviews in this catalogue then answer the questions in the then answer the questions in the Quiz and mail your answers to Logic 3. All entries received before 31st January will be eligible for the competition Prizes will be awarded to the first 12 correct

Here's your chance to win these desirable Spectrum add-ons, but don't leave it too late, make sure. your entry reaches Logic 3 before the closing date!



The Logic 3 Spectrum Club was launched in July, 1984 and has CLUB SUCCESS been an outstanding success. Already more than half-way to its target of 10,000 members in twelve months, the continuous growth of the club has kept Logic 3's staff working seven days a

Tony Toller, Logic 3's managing director and coordinator of the week just to keep up with demand. Club, explains its success as follows: "With other clubs once a person has joined there is no more reason for the club to try to support its members who each month have to purchase a certain number of products from a short list. Our Club is different. Members have no obligation to purchase any products

is on us to choose only the best quality products and offer the best possible prices. We also take a lot of pride in publishing independent reviews on all the products we carry and if we do not like something about a product we are not afraid so say so. Tony Toller's policy of offering Club members a real service rather than just running "yet another mail order business" is winning new members all the time. But size by itself is not the main objective "as we grow so we will be able to improve our service to members still further and perhaps, one day, develop the club catalogue into a proper magazine." With the Christmas edition of the catalogue already running at a bumber 20 pages containing reviews of more

than 180 products that day quite soon!

### EDUCATION

A selection of the most effective educational programs Designed for children from the

age of 4 to 18.

#### GAMES

The best games for the Spectrum selected by our ow review panel and rated according to: graphics, soun colour, originality and intere

### \* PROGRAMMING

The 'Learn BASIC' tutorials really show you how to wri structured programs in eas understand stages.

### \* UTILITIES

Design your own games.

### \* HARDWARE

Some good deals in hard and peripherals.

### LOGIC 3's SOFTWAR PANEL

Neil Atkinson, pupil of Si Bonase School, spends weekends in a shop sell computer software, inte work as a journalist

Andrew Goltz director spent 6 years with Con UK and International C instigated Commodor 'Approved Product' so third party software

Bliss Healey graduat School of Economics translated business s French currently wo design of graphics f software

Tony Toller, directo former journalist, s business application and co ordinator o software club

# LOGIC 3

The Logic 3 Spectrum Club has something for everyone: regular reviews, excellent savings on all the latest top quality games and educational software.

and discounts on hardware

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TO JOIN FILL IN YOUR NAME AND ADDRESS ON THE ORDER FORM IOR ON A SEPARATE SHEET OF PAPER) AND SEND WITH YOUR 13 00 TO THE ADDRESS BELOW

MEMBERSHIP DEPT. ECTRUM CLUB THE LOGIC 3 SP OUNTBATTEN HOUSE STREET

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sEF 1

#### kic Attack



Machine Joystick npston and

Category



Club price: £4.96 Price. f5.50

During your quest for The Golden Key of ACG you become trapped in an evil haunted castle. As you wander around the castle's ancient rooms and passages you encounter Frankenstein, Dracula and the Devil himself! As you move from room to room you try to ward off the ghouls and pick up any items which may be of use later. A fast moving 'graphics only' adventure

Ratings 10 Graphics: 7 Sound 6 Colour 7

Originality 9 Interest 7 Order code ATIAT

Avalon



Machine Joyatick Kempsto Category Graphy 5 Publisher

#### Club price: £8.75 Price: £7.95

An amazing 3D arcade/adventure Avalon features 223 rooms on eight levels, and over 100 characters You control the "astral projection" of Meroc, a ghostly wizard figure who floats around in an eerie way Your mission is to banish the Lord of Chaos who has terrorised peasants by stealing corpses of the dead. You will need various spells and skills which can be found in the rooms of the castle of the Lord

of Chaos. The screen display shows Maroc the room that he is in, any magical objects, and also any of the 100 other characters. The room and larger magic objects are all drawn in 3D. To collect a magic object or spell you just guide Maroc over it.
To cast a spell, use your joystick or keyboard to select the right spell from the spell scroll. Only certain spells will provide defence against

certain enemies. Avalon is a complex game, and you must read the instructions. The graphics are clear and well animated, and the sound is good. Plenty to keep you amused and intrigued for a long time. An original graphics adventure -- recommended

Deus Ex Machina



Joystick Category Publisher Automala

Club price: £13.50 Price: £15.00

The prospect of an all star cast performing in stereo sound synchronised with a computer game and coming from a software house of such standing as Automata was pretty exciting Perhaps that was the problem With a lot of software there is such a build up that the product has to be incredible to live up to it all Deus Ex Machina turned out to be a bit disappointing, but we'eve included it in our catalogue because because it's a 'first' and it's uniqueness makes it a must for

collectors To play the game properly you need a tape recorder (preferably stereo hi-fi) as well as your normal Spectrum kit. You load the program and play the audio tape. then there's a countdown routine to enable you to synchronise the

start The basic theme is the story of life and its struggles. You start as a seed in the womb, progress to becoming and embryo, through birth, life and on into old age. The computer side consists of a number of arcade-style games where you're constantly having to fight off the problems of life, even to the end where you try to stop your blood cells clotting. The audio tape tells the story and accompanies most of the games

with songs. The soundtrack would do credit to a West End musical, the computer games are average - there's no score so you can't tell how you're doing. Different? Yes. Interesting?

Yes, if you're a Psychologist! Ratings 10 Graphics: 7

Originality, 10 Interest 6 Order code: DEM

#### **Doomsday Castle**



Joystick Kempston F (J. Heat '>inclair Category AICHOR MARKODAN TRAFF Publisher Falliasy

Club price: £4.95 Price: £6.50

Another high quality arcade adventure from Fantasy. You explore an enormous castle, consisting of no less than 255 labyrinths connected by 49 passages. Get to the corridors by blasting through the doors, whilst avoiding the extraordinary aliens. wour lasers by shocking

original game of lasting interest.

Ratings /10 Graphics: 7 Sound: 7 Colour: 7

Order code: DOOCA

### **Jet Set Willy**



Ekanon Joystick AGF Category

Club price: £4.55 Price: £5.95

At last! The long awaited sequal to 'Manic Miner'. The saga 'Manic Miner', The saga continues... Miner Willy has gone from rags to riches. Guide Willy around his clifftop mansion, as he searches for all the bottles and glasses after a party, before his housemaid, Maria, will let him crash out in bed. Check the beach. down the road, and on the

rooftop.
Over 70 screens, amazing graphics and humour add up to make this one of the best for the Spectrum

Ratings 10 Graphics 8 Sound /

Originality 3 Interest 8 Order code JETSE

#### Jokers Wild



Joystick Category



Price: £6.99 A high quality value for money package - two games for the price

of one. One game is arcade style, the other adventure Your mission is to defeat your enemies who are travelling the universe disguised as magicians
This year, the fair which they travel with has been set up on earth Here they have been hypnotising unsuspecting earthlings, who are then led into 'bunko-booths' where they are robbed of their souls. The enemy's main power lies in a pack of hypnotic cards, which you must try to capture, first in the arcade game, then in the adventure Before you can play the adventure you have to reach at least level 4 of the arcade game. From here on, on completion of each level further clues for use in the adventure are given. For those of you whose arcade or adventure playing skill is not quite up to scratch there is a useful 'Panic-Packet', which contains useful clues to help your

game play. Good value Ratings, 110 Graphics. 6

Originality 8



Machine Joystick Kempston AGF Protek Interface II Category Arcade Adve Publisher



Club price: £4.55 Price: £5.95

Willy the Miner has fallen down a disused mine shaft. He works his way through the various levels collecting keys and searching for secret treasure. Manic Miner is a classic arcade game for the Spectrum - There are 20 caverns to penetrate, each requiring its own bit of ingenuity to ensure success A classic game that set the standards others are judged by

Ratings 10 Graphics B

Originality 9 Interest 9 Order code MANSP

#### Colour 9 Mugsy



Machine Joystick Category



Club price: £5.55 Price: £6.95

From the publishers of the top selling adventure - The Hobbit - comes their newest release, MUGSY. The game can best be described as a comic strip featuring animated characters As Mugsy, you must organise your gang and their dealings - such as protection rackets and the purchase of weapons and ammunition, and most important of all make sure that your gang stays on top.

Muscle in on the action

Ratings 11 Graphics 4 Sound 9 Colour B

Originality 19 Interest 9 Order code MUGS1

#### Sabre Wulf



Machine Joystich interface I Category Ar arte All



From the publishers of Spectrum of the Classics such as Atic Atac and Lunar Jetman Lunar Jetman now comes SABRE at in WULF, an arcade/adventure epic set in the deepest jungle The deeper you explore, risking and limb, the more challenges ye face: hippos, rhinos, warthogs, tarantulas, hats and at least 30

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## LOGIC 3

shot finde, temperature, weepon and navigation All and resting Arran 3D game featuring on, realistic graphics

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#### Thompson's athlon

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Machine Joystick Category Publisher



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nd beyond to the future, ne is a must for history nd frustrated time travellers

Order code LOTSP

thield repeting against the computer are Daley Thompson, facing ce f6 90

pruelling events

he test day you can choose to

propere in the 100 metres, long

John Shot pul, high jump and 400

John Shot pul, high jump and John Shot pul, high jump and John Shot pul, high jump and the 1500 metres

John Shot pulming avents you animate in the running events you animate Daley by either pressing two keys a title more skill and utiling great title less finger staminal! In the long jump, after a good run up try to get a take off angle as near to 46 degrees as possible in the high all degrees as possible in the high pump, judge your take off and the inght time to fall, without knocking off the ber. In the pole-vault get the pole as close to 90 degrees as you can and plant it in the right place in the judelin and riserus. place. In the jevelin and discus work up a really powerful throw and remember to release it on and remember to release it on time! There is a comprhensive on time! There is a comprhensive on time! There is a comprhensive on the screen score board showing world records, qualifying times, etc. if the screen score of the score of the screen score of the score of the screen score of the score of the screen score of the score of the score of the screen score of the s responsive. Nover toucnes, like the officials coming out and measuring ong jumps, the crowd cheering, and Daley scratching his head or leaping around, add to the enterment rid a speed responsibility.

enjoyment of a good game Ratings 10 Graphics: 8 Sound ? Colour. 8

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Joystick Category

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case. Throughout the game, time as displayed by a clock on the side played by a clock on the street and the displayed by a clock on the control of the clock of t

Holmes to sleep "the garrier shown both text and graphical representation on the screen and representation on the screen and can last for up to a month by saving it after each session perspective. saving it are each session superior entertainment, brilliantly absorbing.

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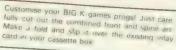
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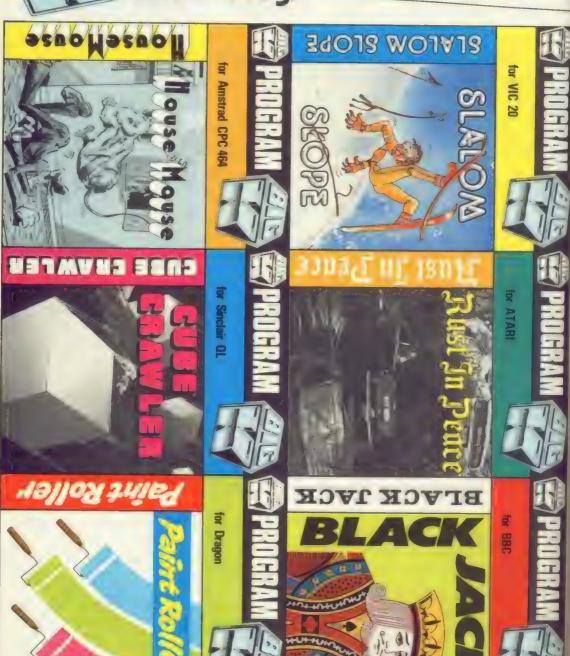
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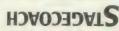




























# MONTH

What else

but... GOATBUSTERS!

The (almost) Compleat JEFF MINTER

\*Yak the Hairy' talks exclusively to BIG K. Frank, earnest, passionate. Views on software, style..and other subjects starting with S.

\*The Llamasoft line-up: games featuring furry creatures, among other strange objects.

\*EXCLUSIVE PREVIEW of Minter's newest runner - Mama Llama!

## PLUS SHAFTER!

The Spectrum listing that unlocks the mega-secrets of BIG K's reviewing style. You won't believe it - we don't believe it!

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All non-human life is here. .read it at your own risk

## REMEMBER

in BIG K no one can hear you scream. . .



## by Alan Heywood

Life in the Corridors of Power isn't easy. Someone's got to arrange to do the frequent whitewash jobs that every government needs.

This exciting game, based on authenticated Civil Service leeks, has you struggling to paint every bit of floor space, but beware of your paint running out.

#### CONTROLS:

Left cursor: Go left Right cursor: Go right

Space bar: Blast through obstruction

```
10 'SHAPAINT ROLLERANS'
 20 '##BY ALAN HEYWOOD##"
 30 CS=RND (-TIMER)
40 PMODE1,1:PCLS2
50 GOSHB 830
 60 SOREEN 1,0
 70 GOSUB 1080
80 COLOR2
 90 FORR=5T01STEP-1:PLAY-0"+STR#(R)+"1255
L4CDCDDFDFEFEFCCC":NEXT
 100 0010 350
110 Y=Y+4:C=PPOINT(X,Y/8):CU-PPOINT(X+10
 , Y+81
 120 ON C GOTD 440, 140, 130, 440
130 Y=Y-4:PA=PA+1:GØT0150
 140 IFC1=3THENY=Y-4: PA=PA+1
150 PUT (X, Y) - (X+10, Y+8) P1, PSET
140 0010 380
170 X=X-4:C=PPO/NT(X, Y):C1=PPOINT(X, Y+8)
180 ON C1 GOTO 440, 290, 190, 200
190 X=X+4:PA=PA+1:G0T0210
200 IF C=3 THEN X=7/4:PA=PA+1
210 PUT (X, V/ - (X+8 /T+8) , P2. PSET
220 0010306
230 Y=Y-4: C=PPOINT (X, Y): C1=PPOINT (X+10, Y
240 ON C 00TO/440, 260, 250, 260
250 Y-Y+4:PA-PA+1:0010270
260 /IFC1=3THENY=Y+4: PA=PA+1
276 PUT (X /1) - (X+10, Y+8) ,P3,PSET
260 0010300
290 X=X+4:C=PPOINT (X+8, Y):C1=PPOINT (X+8,
300 ON C1 GOTO 440,320,310,320
310 X=X-4:PA=PA+1:GOTO330
320 IFC=3 THEN X=X-4:PA=PA+1
330 PUT (X, Y) - (X+8, Y+8) , P4, PSET
340 6010380
350 AS-INKEYS: A-A+ (AS-CHRS(8)) - (AS-CHRS(
360 A=A-4#(A(1)+4#(A)4)
370 ON A GOTO 110,170,230,290
380 PA-PA-1: IF PACO THEN 790
390 IF PA=20 THEN 710
400 IF AB=" THEN 570
410 PSET (44+PA, 6, 2)
420 IF RND(SK)=1 THEN 530 ELSE FORR=1TO1
O: NEXT
430 0010 350
440 PLAY*01V31*:FORP-1T04:PLAY*T2550+DCG
C":NEXT
450 COLORZ: ON A #05UB 490,500,510,520
460 PC-PC+1: IF PC-10 THEN 730
470 PA=PA+ (8K#2): SC=SC+2
480 COLOR3: £ INE (44,6) - (42+PA,6) , PSET: COL
OR2:00T0320
490 LINE(X-2, Y+4) - (X+10, Y+14) , PSET, BF: Y=
Y-4: RETURN
500 (INE (X-10, Y-2) - (X, Y+10) , PSET, BF: X=X+
4 RETURN
510 LINE (X-2, Y+2) - (X+10, Y-10) , PSET, BF: Y=
Y+4: RETURN
520 LINE (X+6, Y-2) - (X+18, Y+10) , PSET, BF: X=
X-4: RETURN
530 COLORS
540 ON RND(2) GOTO 550,560
550 A1=RND(5) #36+12: A2=RND(4) #36+2: LINE(
```

A1, A21 - (A1+12, A2+4), PSET, BF: GOTO 350 560 A1=RND(6) #36-2: A2=RND(3) #36+16: LINE(



A1, A2) - (A1+4, A2+12) , PSET, PF: G0T0350

570 IF PACZZ THEN 690

580 COLORZ: ON A GOSUB 610, \$30,650,670 590 PA-PA-(18-SK):PLAY-V31-FORR-1T07:PL

AY"T69L404V-V-V-V-GFDC": NEXT: PLAY"V15":L THE (255, 6) - (44+PA, 6) , PSET

600 IF PA:20 THEN 710 ELSE 420

610 IF Y>154 THEN 350

620 LINE (X-2, Y+12) - (X+10, Y+16) PSET, BF:R ETURN

430 IF X(22 THEN 350

640 LINE (X-8, Y-2) - (X-4, Y+10) . PSET , BF: RET

650 IF YC28 THEN 350

660 LINE (X-2, Y-8) - (X+10, Y-4) , PSET, BF) RET

670 VF X1220 THEN 350

680 LYNE (X+12, Y-2) - (X+16, Y+10) , PSET, BF:R ETURN

690 FORR=1 T03: DRAW BM90, 10C4; XPA\$; BM134 4; XT#; BM164, 4; XLO#; ": PLAY "V31T32L405CDC D\*: COLOR2; LINE (90,4) - (188,10), PSET, BF: PL AY"C": NEXT

700 0010356

710 FORR=1T03: DRAW\*BM90,1004; XPAS; BM134, 41XLOSI ":PLA"T32V31L402DCDC":COLOR2:LIN E(90,4)-(158, 10), PSET, BF:PLAY\*D\*: NEXT

20 GOT0410

730 SK=SK-1: IF 9K(2 THEN SK=2

740 WE#="########WELL DONE######### :FORT=1703:FORR=8 YO1 STEP -1:CLSR:PRINT 6-31+(324R), WEG: SOUND 250-(R+10), 1:NEXT :NEXT:PRINT9225, WES

50 FORR=32 TO 193 STEP32:PRINTER, "#"1:P

RINTSR+31, "#"I:NEXT

760 PRINTS72, "SCORE =" | SCI : PRINTS! 04, "PAINT BONUS =" | PAI : SC+SC+PA: PRINT&13 6, "FINAL SCORE =" (SC) : PRINTS168, "SKILL L

EVEL = 11-SK 770 PLAY"D1":FORR=1T04:PLAY"DET16L4CDCDE

FEFGAGAB": NEXT

780 GOSUB 1010:GOTO60

790 PLAY"T25501V31":FORR=1 TO 30 FORR1=1 TO4: SCREENI, 1: PLAY DE: SCREENI, O: PLAY TOT: NEXT: PLAY"V-DC": NEXT: PRINT5235, "GAME OVE

900 CLS:PRINT642, "SCORE = ":SC::PRINT610

6, "AGAIN (Y/N) ?" |

BIO AS=INKEYS: IF AS=" THEN BIO

820 IF AS-"N" THEN END ELSE IF ASC>"Y" T

HEN 810 ELSE RUN

830 DIMP1(1),P2(1),P3(1),P4(1),PP(2)

840 PS= "BM100, 100; C4R8D2C1NL8D2C4NL8L8R4

850 DRAW"AO"+P#:GET(100,100)-(110,108).P

B60 PCLS2: DRAW"A1"+P8: GET (92, 100) - (100, 1

08), P2, G 870 PCLS2: DRAW"A2"+P\$: GET (92, 92) - (102, 10

980 PCLS2: DRAW"A3"+P8: GET (100, 92) - (108, 1

990 PCLS2: DRAW-AOBM100, 100; C1D6R8U8L8": PAINT (104, 104), 1, 1: DRAW-C4BL 2U2E2R8F2D28G ABDOM ANALADE

900 GET (98, 96) - (110, 108) . PP. G

910 A8=STRINGS(3,128):CLS0:FORR=194 TO 2 20

720 PRINTSR-32, CHR#(133);:PRINTSR, CHR#(1 33);:PRINTER+1,STRING\$(2,143);:PRINTER+3

2, CHRS(133);:READSS:PRINTSR-1, BS;:SOUND R, 1:PRINTER-32, AB::PRINTER, AB::PRINTER+3 2, A\$1 : NEXT: PLAY " T2L 4P1"

930 DATA ,...,,,,P,A,I,N,T, ,R,O,L,L,E,

940 CLS:PRINT" YOU, AS THE PAINT ROLLER, MUSTGET TO THE 10 PAINT TIME ON THE SC REEN TO REPLENISH YOUR SUPPLY. ",, "HOWEVE R, THE ROUTE YOU TAKE CAN SOMETIMES BE B LOCKED AND THE ONLY WAY TO GET PAST I S TO BLASTYOUR WAY THROUGH.

950 PRINT THIS USES UP SOME OF YOUR VAL UABLE PAINT. ": PRINT, , "USE THE LEFT AND R IGHT ARROWS TOSTEER AND THE SPACEBAR TO BLAST. ",, "HAPPY PAINTING ",,, "ANY KEY T

O BEGIN. "

960 AS=INKEYS: IF AS=" THEN PLAY\*T10L2V3 CL 3EL 4G \*: GOT 0960

970 PLAY" V20": CLSRND (9) -1: PRINT\$228, "ENT

ER SKILL LEVEL (1-9)"|
980 AS=INKEYS: IF AS="" THEN 980

990 V-VAL (AB): IF V=0 THEN SOUND 1,11: GOT 0 980

1000 SK=11-(V):CL SRND(8)

1010 X=122: Y=90: PA=205: A=RND(4): PC=0

1020 PCLS2: COLOR3: LINE (10, 14) - (242, 174), PEET, B: PAINT (0,0): COLOP2: LINE (0,2) - (255, 12) , PSET, BF: COLOR3

1030 FORR=26 TO 220 STEP 36:FORR1=30 TO 160 STEP 36:1 INE (R,R1) - (R+20,R1+20) . PSET , BF; NEYT: NEXT

1040 LINE (44,6) - (248,6) . PSET

1050 PAS="AOUGR4D4L4BR8D2U6R4D6U2L4BR8U4 Despaude 6068R4R4LZD6": Te="R4LZD6BR6U6R4D 61 4BRRII 684D61 4":LOB= "DER4BR411684D61 4BRBN USPANITARANGS

1060 DRAW"BN6, 1004"+PAE

1020 RETURN

1080 FORP=1 TO 10

1090 A1=RND((71) \$36-24:A2=RND(5)#36-20

1100 IF PPOINT (AL +2, A2+4) = 1 THEN 1090 1110 IF A1=120 AND A2=88 THEN 1090

1120 SOUND R#10,1

1130 PUT (A1, A2) - (A1+12, A2+12) , PP. PSET: NE

1140 RETURN



First of an engaging – and snide – new BIG K series in which we profile Great Dead (or Near-Dead) Computers of Our Time. . .

# THESE WE HAVE

# A VICTIM OF THE DEARTH OF FORTH

## RY RILL RENNETT

THE JUPITER ACE

THE BEST THING about the Jupiter Ace was that it doesn't use boring old BASIC. Gone were difficult concepts like line numbers, logical program flow and simple to understand commands.

Instead, the Jupiter Ace used Forth, the computer language of the space age, designed to control radio-telescopes. Forth makes use of simple, easy to grasp features like recursion, stacks and peculiar symbols. Gary Kildall, the father of CP/M, describes Forth as a 'write-only language', pointing out how difficult it is to understand a Forth program, particularly somebody else's.

This is one of the more useful aspects of the language for professional programmers. After all, if programming was simple then any old person could manage to do it, and programmers would't be able to pose in wine bars discussing their work in very loud voices and even louder shirts.

Of all the advantages of Forth, the best is that it doesn't use much memory. The Jupiter Ace had only 8k of ROM so it was less likely to contain bugs, and there was a compact 3k of RAM. This

ultra-thin plastic which could be wiped with a ordinary dishcloth to remove unsightly fingermarks. It came in a tasteful white colou scheme complete with go-faster stripes. The ultra-thin plastic had been specially developed for lightness and flexibility.

One of the most pleasing aspects of the struction came into play when programming on a draughty room — should a sudden gust teasingly blow your micro away, it would gently float to the ground

Ergonomically the Ace was a triumph. It used the tasteful 'dead-flesh'-style keyboard first mad popular on the ZX Spectrum. But amazingly theys had been crammed into a smaller space. The notion only meant that the computer was mocompact—taking up only a fifth of the space of Commodore 64—but also made playing game more skilful as the keys were harder to hit especially liked the way the key markings wore of after a while, making the computer even mossecure against prying hands.

Everybody knows that one of the moimportant aspects of any computer is the
associated software base. There was never a
great deal of software for the Jupiter Ace, but
what did (does?) exist was (is) certainly
interesting. Take, for example, the Mastermind
program. This microcomputing breakthrough
featured on-screen display in breathaking
monochrome, state-of-the-art keyboard entry and
made use of the integrated beeper. Most of the
rest of the software for the machine took the form
of toolkits and utility packages, so Jupiter Act
owners weren't going to be wasting their time
playing games.

There weren't a lot of peripherals available for the Ace — though apparently someone (one) in the Yorkshire area did buy the disc drives. This wasn't the drawback it appeared to be, because the interface at the back of the machine doesn't work too well. Normally the Jupiter Ace came with a white on black TV output. However if you had a soldering iron, a degree in electronics, a month of Sundays and some money to spend, building a colour monitor output was a trivial exercise. A high-resolution mode of 256x192 pixels placed the Ace in the same class as the Commodore 64.

The Jupiter Ace was not the only micro in the Jupiter Cantab range of computers. Later models came with a cavernous 19K of RAM, and a special switch which could 'turn-off' the Forth ROM. Shortly before the company went bust there were rumours of a version of BASIC available on taps.

Gone...but not forgotten.



added to the speed of the machine as there wasn't much memory to address. As RAM memory can cost as cuch as E3 a kilobyte, this also meant that the Jupiter Ace didn't cost too much at E80.

Just because the Jupiter Ace was cheap to buy, there was no reason to assume that the manufacturer — Jupiter Cantab — had cut any corners. The case was made of the highest quality

# GULPO!

Yes, it's here again. The column that dares to name names and point the accusing finger — mostly at ourselves. Did you spot hese classic blunders for the past . . ?

#### He Wrote One (BIG K No.6, p.62)

Apologies to Jean Frost of Addictive Games, for it was the who translated Football Manager for the Commodore 64, and not Peter Lunn. All credit goes to Peter for the BBC version.

#### Maze of Gold for VIC 20

#### BIG K No.8, p.95)

confused VIC 20 owners rest assured, you are not going tary — we are (or did a long time ago, depending on who you believe). Part of this games listing was missing. Selow is the first section of the game which must be be before the section that appeared in BIG K No.8. Note that the listing here is untranslated and contains all the necessary Commodore graphics characters. Just type 1 straight in. Apologies and thanks to Maze of Gold withor G. Roberts — as well as the few billion VIC 20 owners out there.

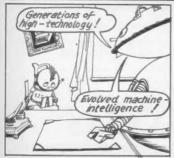
## Turnpike Toad for Oric (BIG K No.8, p.35), Bar Shooting for VIC 20 (BIG K No.9, p.114).

Portions of these listings were rendered illegible due to a bug in reproduction operating system. We apologise. The bug has been shot. Desperate programmers write to BIG K for a correct and clear listing.

## 59 FORRATZ00T01+8WZCY/ NETWOOD 159 REM 79 DATHO: 0,252,252,255,255,66.0 80 DATH235,66,255,24,255,36,255,129 90 DATHO: 0,8,20,60,126,255,255 99 REM 100 DBTF1124 /64,112,0,24,12,12,252 110 DBTF1126,126,96,0,96,96,126,126,126 110 DBTF1 119 PEN 120 DATRI26,126,102,0,102,102,126,126 130 DRTR126, 126, 102, 0, 126, 88, 92, 70 130 MEN 140 DRTM126,126,64,0,120,64,126,126 149 REM 150 DETRIES, 182, 182, 9, 68, 24, 24, 24 169 DETRIES, 182, 182, 9, 182, 182, 182, 68 163 KEN 178 DRTRSB, 162, 162, 8, 126, 162, 162, 162 179 REN 180 DRTR248,252,38,0,38,38,252,248 189 REM 190 DRTR102, 102, 118, 0, 110, 110, 102, 102, 200 DRTR102, 125, 24, 0, 24, 24, 24, 24, 210 DRTR126, 125, 95, 0, 120, 120, 95, 95, 220 DRTR126, 125, 95, 0, 120, 120, 95, 96, 220 DRTR189, 228, 238, 0, 24, 126, 126, 240 DRTR189, 228, 238, 0, 21, 124, 126, 126, 240 DRTR199, 128, 128, 126, 126, 162, 162, 250 DRTR199, 128, 255, 126, 96, 118, 118

#### **BIG K FUNNIES**

BY ROGER WADE WALKER







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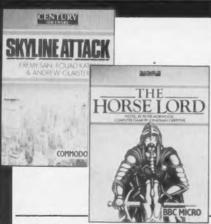
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